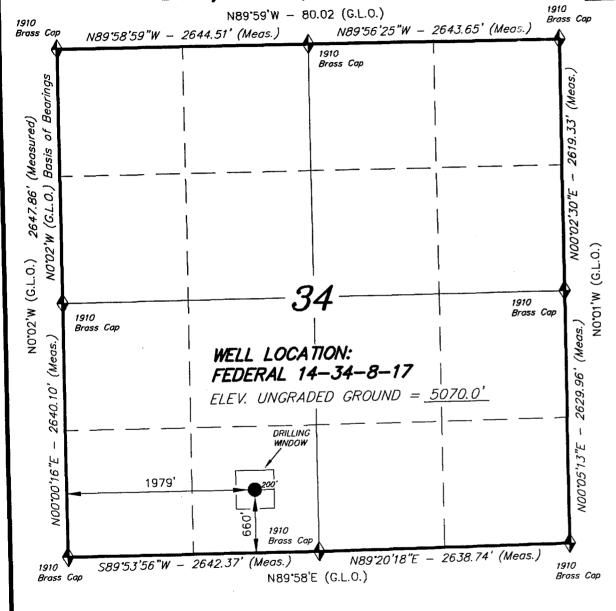
Form 3160-3 (September 2001) UNITED STATES		FORM APPROVED OMB No. 1004-0136 Expires January 31, 2004				
DEPARTMENT OF THE IN	TERIOR		5. Lease Serial No.			
BUREAU OF LAND MANAC	BEMENT		UTU-79017 6. If Indian, Allottee or Tribe Name			
APPLICATION FOR PERMIT TO DE	RILL OR REENTER		6. If Indian, Allottee or Tribe Name			
la. Type of Work: 🖾 DRILL 🗀 REENTER				reement, Name and No.		
1a. Type of work. (A) DRILL			N/A			
1b. Type of Well: Oil Well Gas Well Other	Single Zone Multi	ple Zone	8. Lease Name and Y			
Name of Operator Inland Production Company			9. API Well No. 43-01.	3-3265		
3a. Address	3b. Phone No. (include area code)		10. Field and Pool, or	Exploratory		
Route #3 Box 3630, Myton UT 84052	(435) 646-3721		Monument Bu			
4. Location of Well (Report location clearly and in accordance with a			11. Sec., 1., R., M., 0	r Blk. and Survey or Area		
At surface SE/SW 660' F S L 1979' FWL 535754	57 -109,982	<i>(</i> &	SE/SW Sec. 3	34, T8S R17E		
	-109, 987	P8	12. County or Parish	13. State		
 Distance in miles and direction from nearest town or post office* Approximatley 18.0 miles southeast of Myton, Utah 			Duchesne	UT		
15. Distance from proposed* location to nearest property or lease line, ft.	16. No. of Acres in lease	17. Spacin	g Unit dedicated to this	well		
(Also to nearest drig. unit line, if any) Approx. 660' f/lse, NA' f/unit	160.00		40 Acres			
18. Distance from proposed location* to nearest well, drilling, completed,						
applied for, on this lease, ft. Approx. 1445	6500'		UTU0056			
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will sta	rt*	23. Estimated duration			
5070' GL	1st Quarter 2005		Approximately seven (7) days	s from spud to rig release.		
	24. Attachments	1 1: 11				
 The following, completed in accordance with the requirements of Onshor Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office). 	4. Bond to cover the stem 20 above). 5. Operator certification	ne operation ation. specific info	ns unless covered by an	a existing bond on file (see		
25. Signature	Name (Printed/Typed)			Date		
1/ Candie (10 yes	Mandie Crozier			8/5/01		
Title Regulatory Apecialist				i		
The second of th	Name (Printed/Typed) DLEY G. HILL MENTAL SCIENTIST III	······································		Date D8-17-04		
Application approval does not warrant or certify the the applicant holds le operations thereon. Conditions of approval, if any, are attached.	gal or equitable title to those rights in	the subject	lease which would entitl	e the applicant to conduct		
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it States any false, fictitious or fraudulent statements or representations as to		d willfully t	o make to any departme	ent or agency of the United		
*(Instructions on reverse)						
	no leve	this	RI	ECEIVED		
	rederal Approval of Action is Necessary	I	A	UG 0 9 2004		
	F3 -					

DIV. OF OIL, GAS & MINING

T8S, R17E, S.L.B.&M.

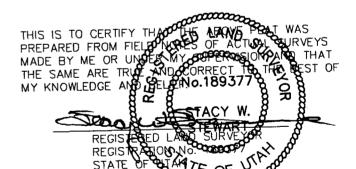


= SECTION CORNERS LOCATED

BASIS OF ELEV; U.S.G.S. 7-1/2 min QUAD (PARIETTE DRAW SW)

INLAND PRODUCTION COMPANY

WELL LOCATION, FEDERAL 14-34-8-17, LOCATED AS SHOWN IN THE SE 1/4 SW 1/4 OF SECTION 34, T8S, R17E, S.L.B.&M. DUCHESNE COUNTY, UTAH.



TRI STATE LAND SURVEYING & CONSULTING

180 NORTH VERNAL AVE. - VERNAL, UTAH 84078 (435) 781-2501

(455) 761 2561					
SCALE: 1" = 1000'	SURVEYED BY: D.J.S.				
DATE: 6-11-04	DRAWN BY: F.T.M.				
NOTES:	FILE #				



August 5, 2004

State of Utah
Division of Oil, Gas & Mining
Attn: Diana Whitney
1594 West North Temple - Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RE: Applications for Permit to Drill: Blackjack Federal 14-33-8-17, 16-33-8-17, Federal 12-34-8-17, 13-34-8-17, 14-34-8-17) and 15-34-8-17.

Dear Diana:

Enclosed find APD's on the above referenced wells. There are a couple of them that are Exception Locations. Our Land Department will get the accompanying letters shortly. If you have any questions, feel free to give either Brad or myself a call.

Sincerely

Mandie Crozier

Regulatory Specialist

mc

enclosures

RECEIVED AUG 0 9 2004

DIV. OF OIL, GAS & MINING

INLAND PRODUCTION COMPANY FEDERAL #14-34-8-17 SE/SW SECTION 34, T8S, R17E DUCHESNE COUNTY, UTAH

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. GEOLOGIC SURFACE FORMATION:

Uinta formation of Upper Eocene Age

2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:

Uinta 0' – 1640' Green River 1640' Wasatch 6115'

3. ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERALS:

Green River Formation 1640' - 6500' - Oil

4. PROPOSED CASING PROGRAM

Please refer to the Monument Butte Field Standard Operation Procedure (SOP).

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

Please refer to the Monument Butte Field SOP. See Exhibit "C".

6. TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATION MUDS:

Please refer to the Monument Butte Field SOP.

7. AUXILIARY SAFETY EQUIPMENT TO BE USED:

Please refer to the Monument Butte Field SOP.

8. TESTING, LOGGING AND CORING PROGRAMS:

Please refer to the Monument Butte Field SOP.

9. ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE:

The anticipated maximum bottom hole pressure is 2000 psi. It is not anticipated that abnormal temperatures will be encountered.

10. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS:

Please refer to the Monument Butte Field SOP.

INLAND PRODUCTION COMPANY FEDERAL #14-34-8-17 SE/SW SECTION 34, T8S, R17E DUCHESNE COUNTY, UTAH

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

1. EXISTING ROADS

See attached Topographic Map "A"

To reach Inland Production Company well location site Federal #14-34-8-17 located in the SE 1/4 SW 1/4 Section 34, T8S, R17E, Duchesne County, Utah:

Proceed southwesterly out of Myton, Utah along Highway 40 - 1.6 miles \pm to the junction of this highway and UT State Hwy 53; proceed southeasterly along Hwy 53 - 13.9 miles \pm to it's junction with an existing road to the northeast; proceed northeasterly -0.6 miles \pm to it's junction with an existing road to the northeast; proceed northeasterly -1.6 miles \pm to it's junction with an existing road to the northwest; proceed northwesterly -0.3 miles \pm to it's junction with the beginning of the proposed access road to the southwest; proceed southwesterly along the proposed access road $-2.200^{\circ}\pm$ to the proposed well location.

2. PLANNED ACCESS ROAD

See Topographic Map "B" for the location of the proposed access road.

3. LOCATION OF EXISTING WELLS

Refer to Exhibit "B".

4. <u>LOCATION OF EXISTING AND/OR PROPOSED FACILITIES</u>

Please refer to the Monument Butte Field Standard Operating Procedure (SOP).

5. LOCATION AND TYPE OF WATER SUPPLY

Please refer to the Monument Butte Field SOP. See Exhibit "A".

6. SOURCE OF CONSTRUCTION MATERIALS

Please refer to the Monument Butte Field SOP.

7. METHODS FOR HANDLING WASTE DISPOSAL

Please refer to the Monument Butte Field SOP.

8. <u>ANCILLARY FACILITIES</u>

Please refer to the Monument Butte Field SOP.

9. WELL SITE LAYOUT

See attached Location Layout Diagram.

10. PLANS FOR RESTORATION OF SURFACE

Please refer to the Monument Butte Field SOP.

11. <u>SURFACE OWNERSHIP</u> - Bureau Of Land Management

12. OTHER ADDITIONAL INFORMATION

The Archaeological Resource Survey and Paleontological Resource Survey for this area are attached. MOAC Report #04-94, 6/2/04. Paleontological Resource Survey prepared by, Wade E. Miller, 7/9/04. See attached report cover pages, Exhibit "D".

Inland Production Company requests 50' of disturbed area be granted for the Federal #14-34-8-17 to allow for construction of a 6" gas gathering line, and a 3" poly fuel gas line. Both lines will tie in to the existing pipeline infrastructure. **Refer to Topographic Map "C."** For a ROW plan of development, please refer to the Monument Butte Field SOP.

Inland Production Company also requests 50' of disturbed area be granted for the Federal #14-34-8-17 to allow for construction of a 3" steel water injection line and a 3" poly water return line.

Refer to Topographic Map "C." For a ROW plan of development, please refer to the Monument Butte Field SOP.

Water Disposal

Immediately upon first production, all produced water will be confined to a steel storage tank. If the production water meets quality guidelines, it is transported to the Ashley, Monument Butte, Jonah, and Beluga water injection facilities by company or contract trucks. Subsequently, the produced water is injected into approved Class II wells to enhance Inland's secondary recovery project.

Water not meeting quality criteria, is disposed at Inland's Pariette #4 disposal well (Sec. 7, T9S R19E) or at State of Utah approved surface disposal facilities.

Reserve Pit Liner

Please refer to the Monument Butte Field SOP.

Location and Reserve Pit Reclamation

Please refer to the Monument Butte Field SOP.

The following seed mixture will be used on the topsoil stockpile, to the recontoured surface of the reserve pit, and for final reclamation: (All poundages are in pure live seed)

No seed mix is required for this location. Upon P&A the seed mix will be determined by an authorized B.L.M. officer.

Details of the On-Site Inspection

The proposed Federal #14-34-8-17 was on-sited on 3/26/04. The following were present; Brad Mecham (Inland Production), Byron Tolman (Bureau of Land Management), and a SWCA representative. Weather conditions were clear at 60 degrees.

13. LESSEE'S OR OPERATORS REPRESENTATIVE AND CERTIFICATION

Representative

Name:

Brad Mecham

Address:

Route #3 Box 3630

Myton, UT 84052

Telephone:

(435) 646-3721

Certification

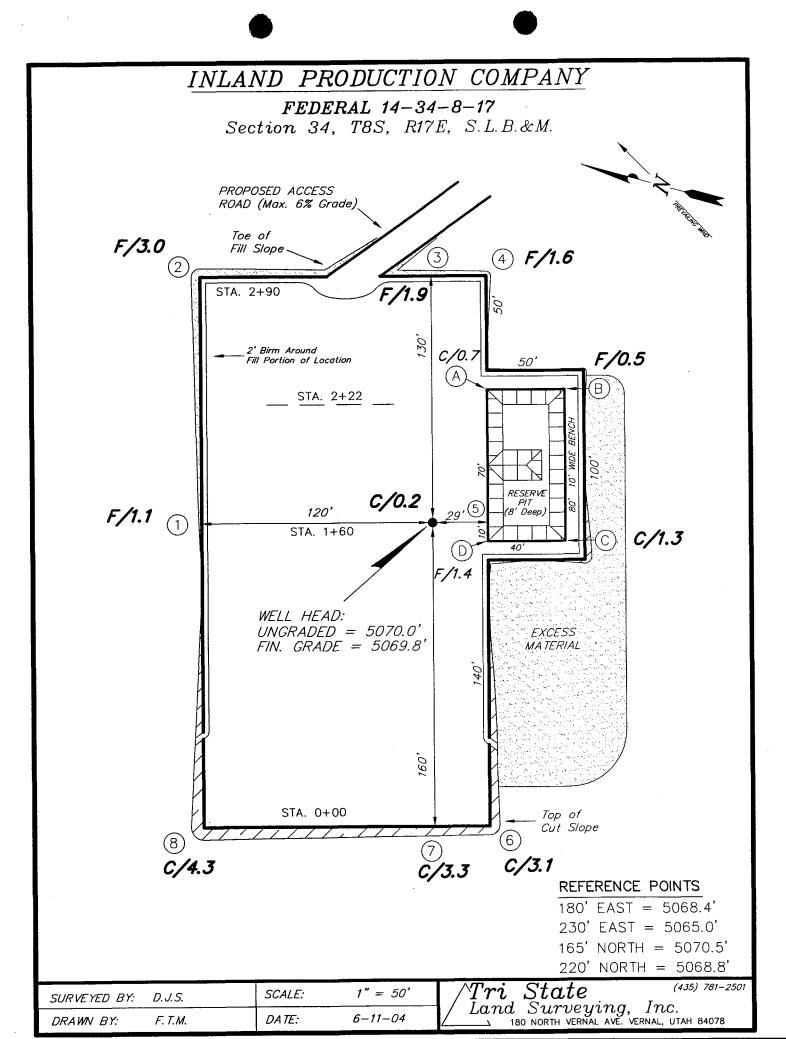
Please be advised that INLAND PRODUCTION COMPANY is considered to be the operator of well #14-34-8-17 SE/SW Section 34, Township 8S, Range 17E: Lease UTU-79017 Duchesne County, Utah: and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by Hartford Accident #4488944.

I hereby certify that the proposed drillsite and access route have been inspected, and I am familiar with the conditions which currently exist; that the statements made in this plan are true and correct to the best of my knowledge; and that the work associated with the operations proposed here will be performed by Inland Production Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Mandie Crozier Regulatory Specialist

8/5/64 Date

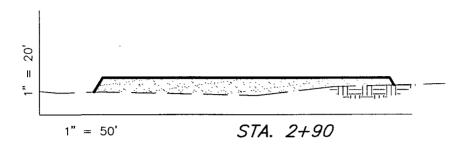
Date

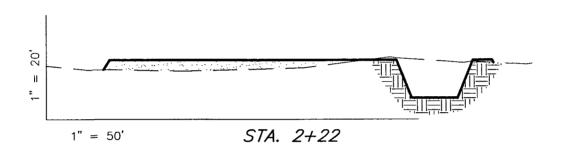


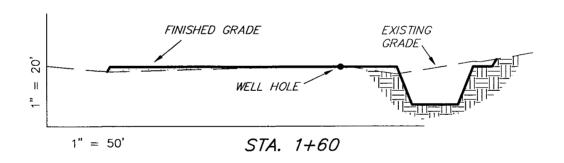
INLAND PRODUCTION COMPANY

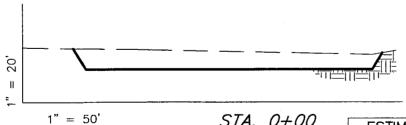
CROSS SECTIONS

FEDERAL 14-34-8-17









NOTE: UNLESS OTHERWISE NOTED ALL CUT/FILL SLOPES ARE

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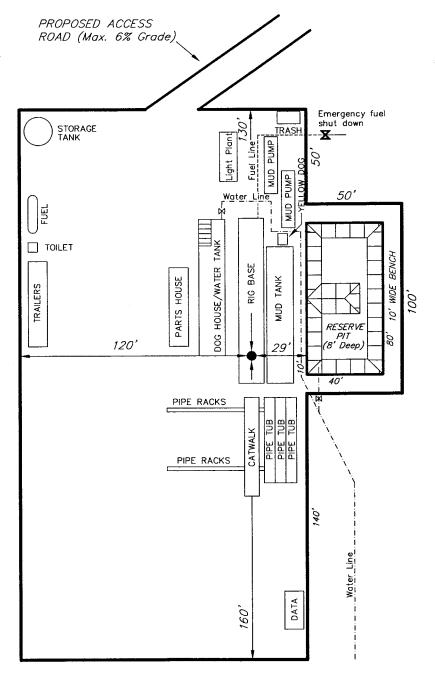
	· '			
ITEM	CUT	FILL	B" TOPSOK	EXCESS
PAD	1,660	1,290	Topsoil is not included	370
PIT	640	0	in Pad Cut	640
TOTALS	2,300	1,290	0	1,010

SURVEYED BY:	D. J. S.	SCALE:	1" = 50'
DRAWN BY:	F. T.M.	DATE:	6-11-04

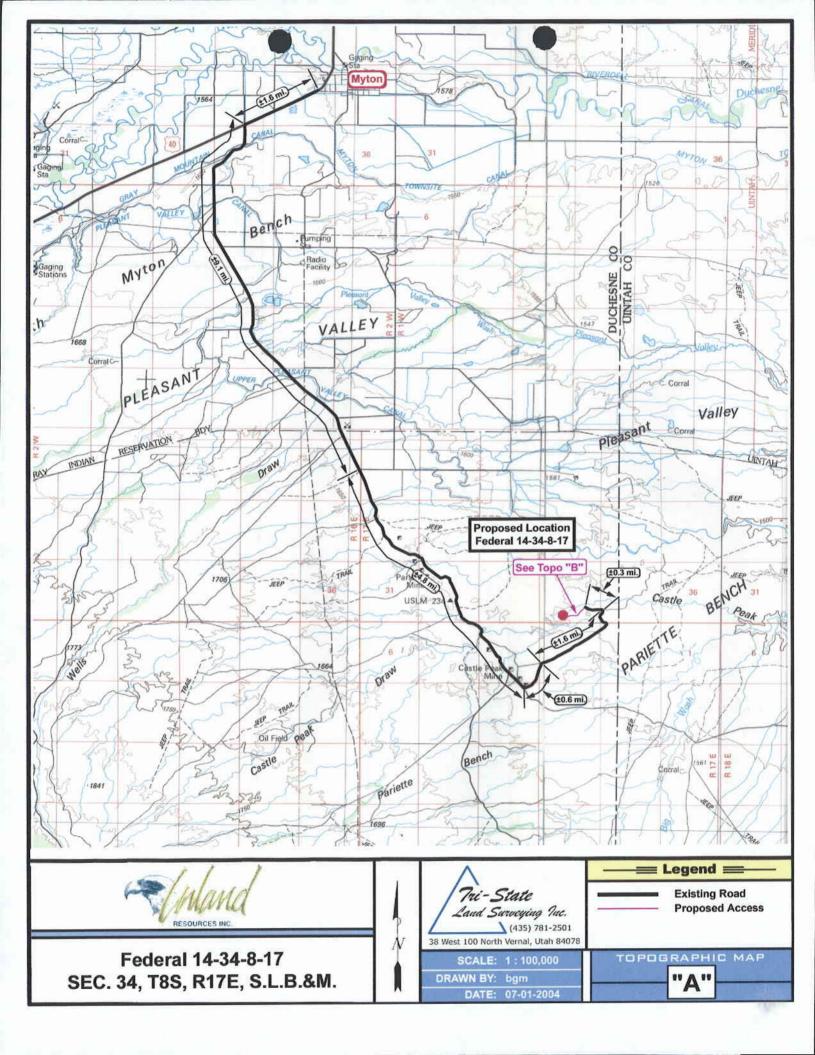
 $egin{array}{ll} egin{array}{ll} egin{array}{ll} Tri & State & {}^{(435)} & {}^{781-2} \ Land & Surveying, & Inc. \ ____ & 180 & NORTH & VERNAL & AVE. & VERNAL, & UTAH & 84078 \end{array}$ (435) 781-2501

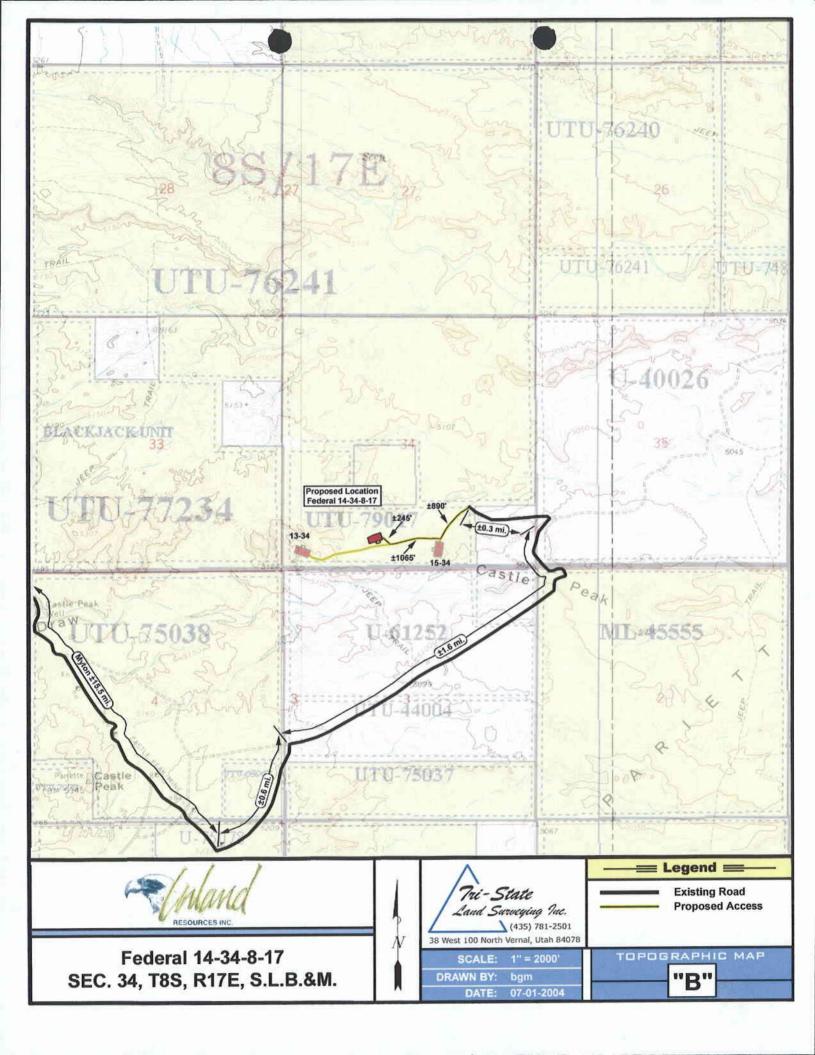
INLAND PRODUCTION COMPANY

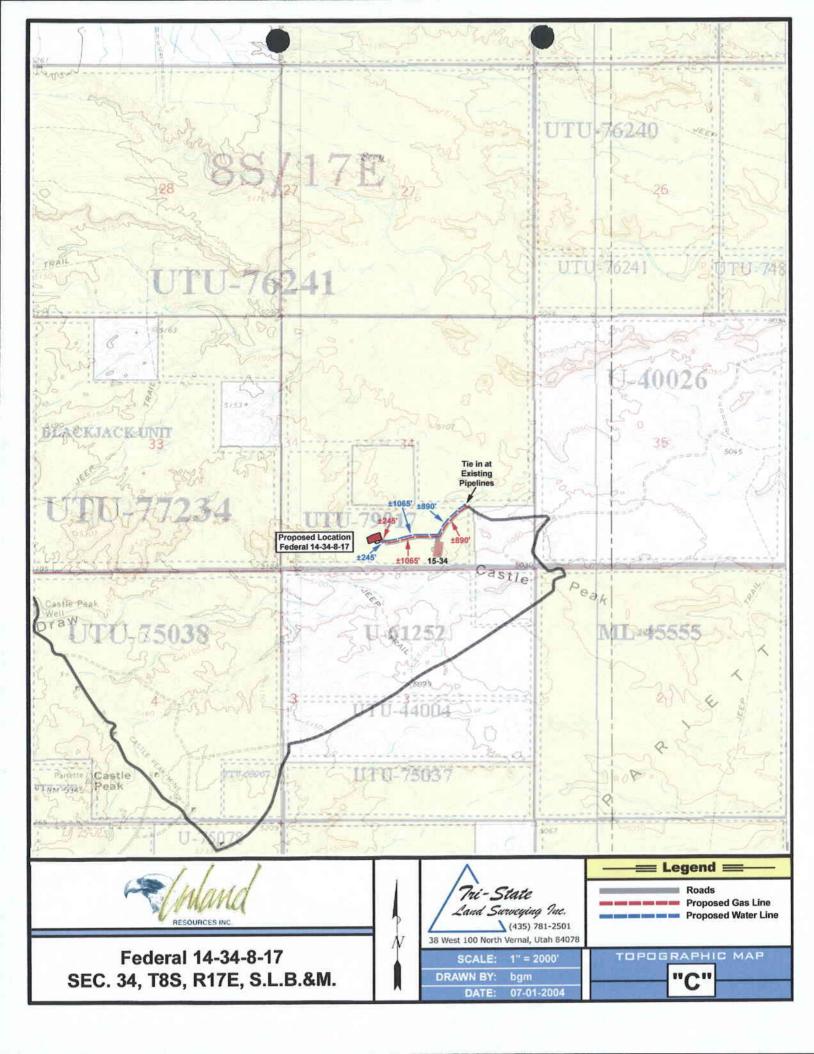
TYPICAL RIG LAYOUT
FEDERAL 14-34-8-17

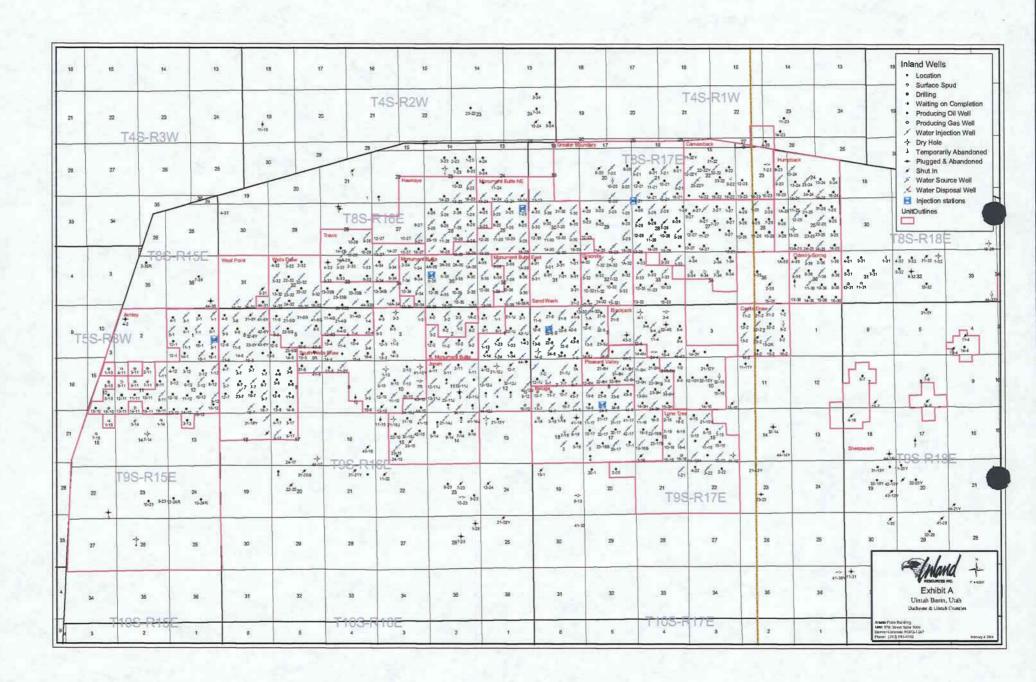


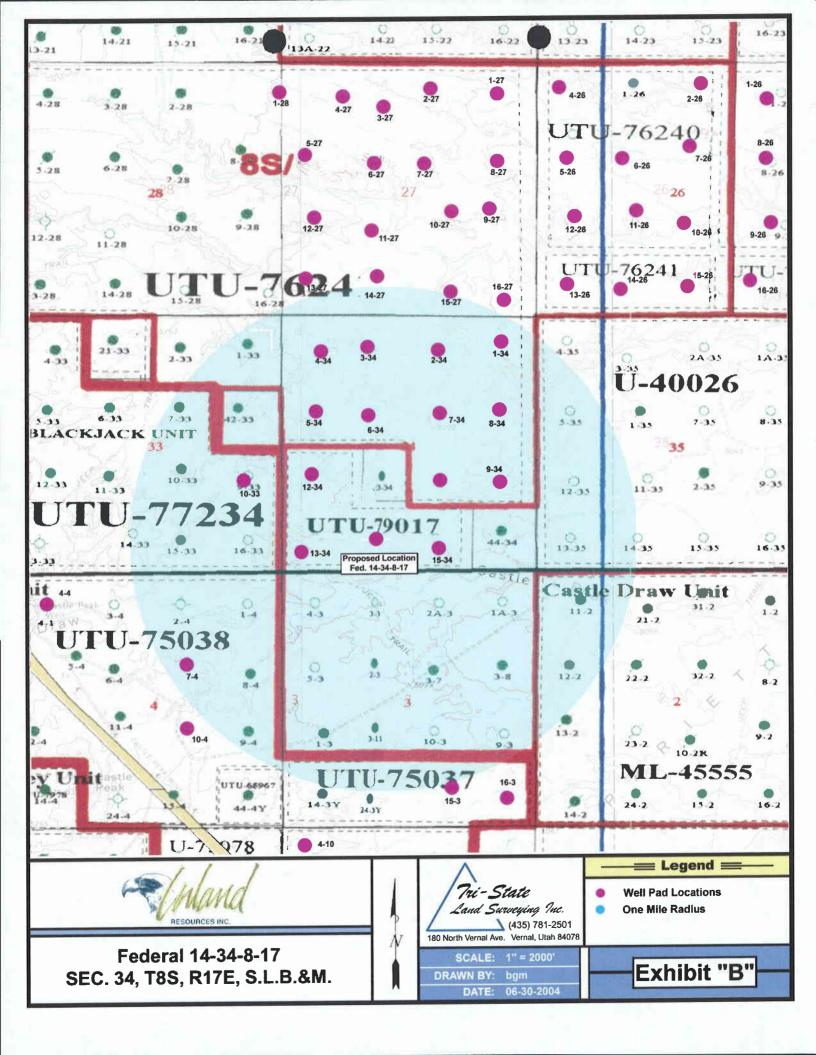
SURVEYED BY:	D.J.S.	SCALE:	1" = 50'	$/Tri_{State}$ (435) 781-2501
DRAWN BY:	F. T.M.	DATE:	6-11-04	/ Land Surveying, Inc. 180 NORTH VERNAL AVE. VERNAL, UTAH 84078











2-M SYSTEM

Blowout Prevention Equipment Systems

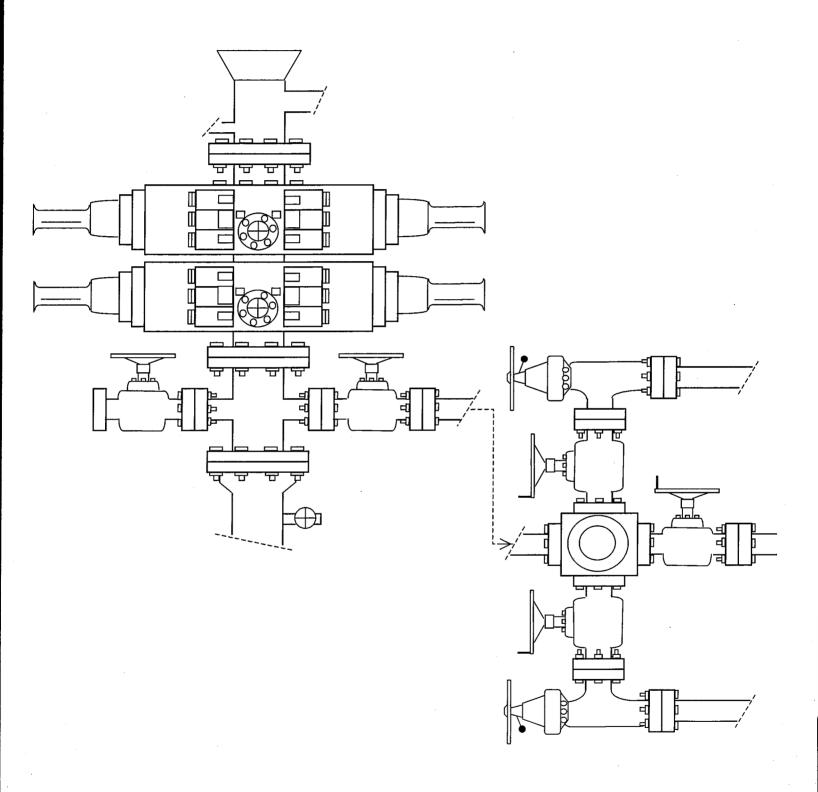


EXHIBIT C

• Exhibit "D"

Page 1054

CULTURAL RESOURCE INVENTORY OF INLAND RESOURCES' SIX BLOCK PARCELS (T8S, R17E, SEC. 20, 33, 34; T9S R16E S. 15; T9S R17E S. 17, 20; and T9S R18E S. 7) DUCHESNE AND UINTAH COUNTIES, UTAH

by

Melissa Elkins and Keith Montgomery

Prepared For:

Bureau of Land Management Vernal Field Office

Prepared Under Contract With:

Inland Resources Route 3 Box 3630 Myton, UT 84052

Prepared By:

Montgomery Archaeological Consultants P.O. Box 147 Moab, Utah 84532

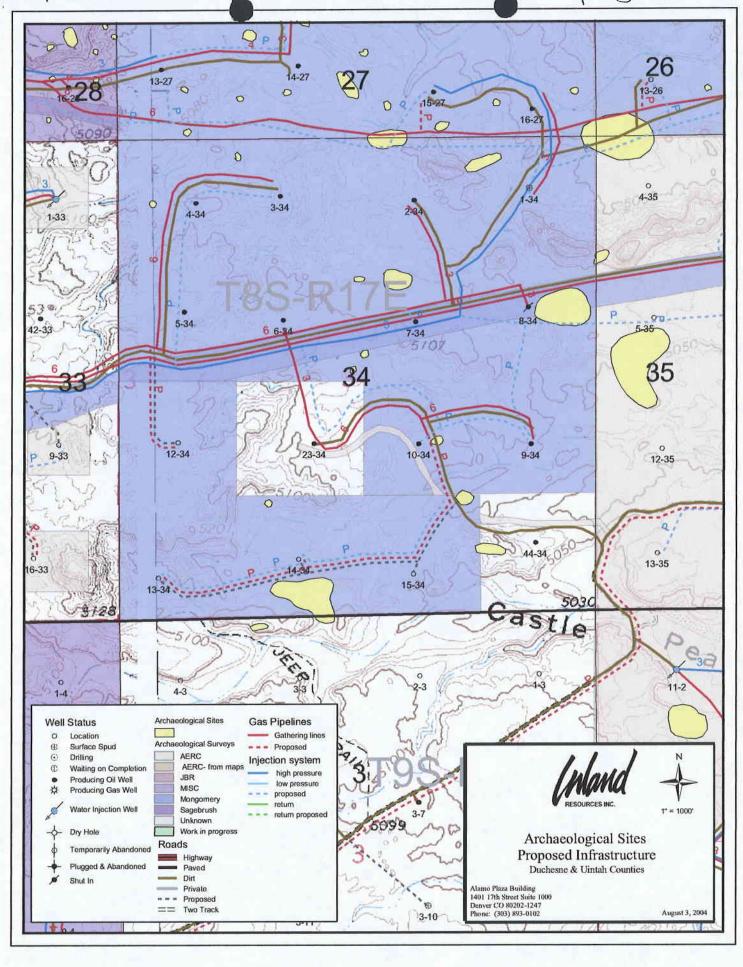
MOAC Report No. 04-94

June 2, 2004

United States Department of Interior (FLPMA)
Permit No. 04-UT-60122

State of Utah Antiquities Project (Survey) Permit No. U-04-MQ-0436b,p

Page 2 of 4



Page 3. 44

INLAND RESOURCES, INC.

PALEONTOLOGICAL FIELD SURVEY OF PROPOSED PRODUCTION DEVELOPMENT AREAS, DUCHESNE & UINTAH COUNTIES, UTAH

Section 34, T 8 S, R 17 E (NW/SW, SW/SW, SE/SW, SW/SE); Section 20, T 8 S, R 17 E (NW/SE); Section 17, T 9 S, R 17 E (SE/SW, SW/SE, SE/SE); Section 20, T 9 S, R 17 E (NE/NE, NE/NW); Section 8, T 9 S, R 18 E (excluding NW/NW, SW/NE, NE/SW, NW/SW, SW/SE)

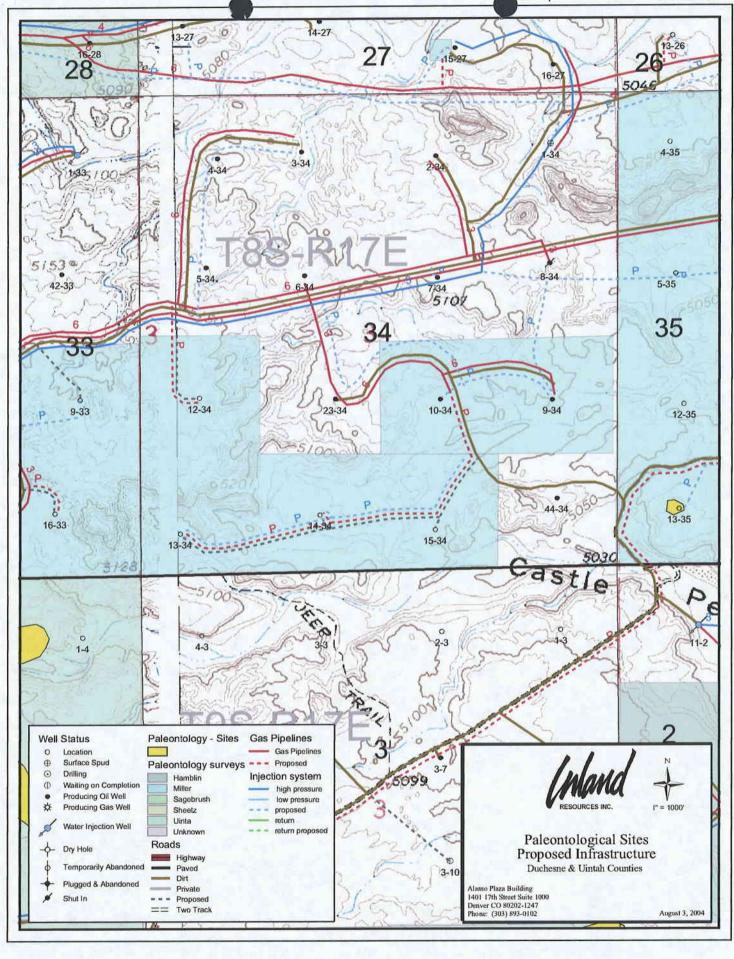
REPORT OF SURVEY

Prepared for:

Inland Resources, Inc.

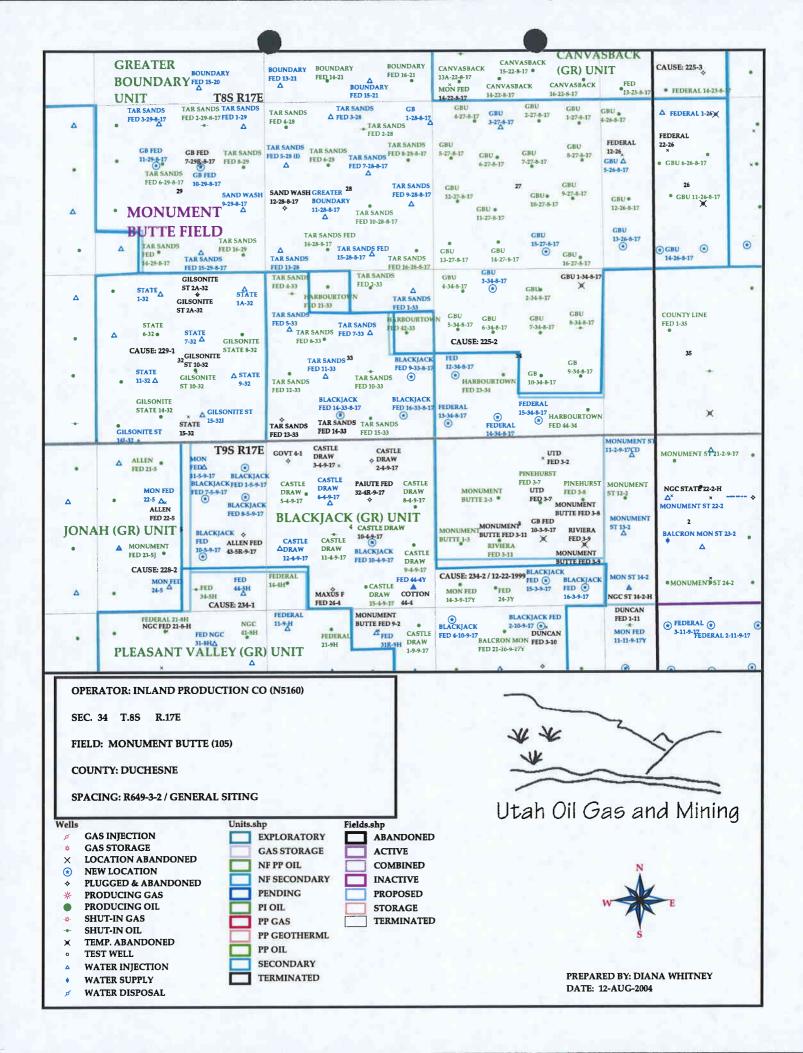
Prepared by:

Wade E. Miller Consulting Paleontologist July 9, 2004



WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 08/09/2004	API NO. ASSIGNED: 43-013-32629
WELL NAME: FEDERAL 14-34-8-17 OPERATOR: INLAND PRODUCTION (N5160) CONTACT: MANDIE CROZIER	PHONE NUMBER: 435-646-3721
PROPOSED LOCATION: SESW 34 080S 170E SURFACE: 0660 FSL 1979 FWL BOTTOM: 0660 FSL 1979 FWL DUCHESNE MONUMENT BUTTE (105) LEASE TYPE: 1 - Federal LEASE NUMBER: UTU-79017 SURFACE OWNER: 1 - Federal PROPOSED FORMATION: GRRV COALBED METHANE WELL? NO	INSPECT LOCATN BY: / / Tech Review Initials Date Engineering Geology Surface LATITUDE: 40.06885 LONGITUDE: -109.9827
RECEIVED AND/OR REVIEWED: Plat Bond: Fed[1] Ind[] Sta[] Fee[] (No. UTU0056) Potash (Y/N) N Oil Shale 190-5 (B) or 190-3 or 190-13 Water Permit (No. MUNICIPAL) N RDCC Review (Y/N) (Date:) NM Fee Surf Agreement (Y/N)	LOCATION AND SITING: R649-2-3. Unit R649-3-2. General
Sop Seperate Go Stipulations: 1- Redeal O Appro 3- Spacing Stip	





State of Utah

Department of Natural Resources

ROBERT L. MORGAN Executive Director

Division of Oil, Gas & Mining

LOWELL P. BRAXTON
Division Director

OLENE S. WALKER
Governor

GAYLE F. McKEACHNIE
Lieutenant Governor

August 17, 2004

Inland Production Company Rt. #3, Box 3630 Myton, UT 84052

Re:

Federal 14-34-8-17 Well, 660' FSL, 1979' FWL, SE SW, Sec. 34, T. 8 South,

R. 17 East, Duchesne County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-013-32629.

Sincerely,

Zon John R. Baza

Associate Director

1. Michael Thehether

pab Enclosures

cc: Duchesne County Assessor

Bureau of Land Management, Vernal District Office

Operator:	Inland Production Company					
Well Name & Number	Federal	14-34-8-17				
API Number:	43-013-32629					
Lease:	UTU-7	9017				
Location: SE SW	Sec. 34	T. <u>8 South</u>	R. <u>17 East</u>			

Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

• Contact Dan Jarvis at (801) 538-5338

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.
- 5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

Form 3160-3 (September 2001)

FORM APPROVED OMB No. 1004-0136 Expires January 31, 2004 UNITED STATES 5. Lease Serial No. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT UTU-79017 6. If Indian, Allottee or Tribe Name APPLICATION FOR PERMIT TO DRILL OR REENTER 7. If Unit or CA Agreement, Name and No. la. Type of Work: ☑ DRILL ☐ REENTER greater NIA 8. Lease Name and Well No. Ib. Type of Well: Oil Well Gas Well Other Single Zone Multiple Zone Federal 14-34-8-17 Name of Operator 9. API Well No. Inland Production Company 43:012 3a. Address 3b. Phone No. (include area code) 10. Field and Pool, or Explorator Route #3 Box 3630, Myton UT 84052 (435) 646-3721 Monument Butte 4. Location of Well (Report location clearly and in accordance with any State requirements.*) 11. Sec., T., R., M., or Blk. and Survey or Area 660' FSL 1979' FWL At surface SE/SW SE/SW Sec. 34, T8S R17E At proposed prod. zone 14. Distance in miles and direction from nearest town or post office* 12. County or Parish 13. State Approximatley 18.0 miles southeast of Myton, Utah Duchesne UT 15. Distance from proposed* 16. No. of Acres in lease 17. Spacing Unit dedicated to this well location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) Approx. 660' f/lse, NA' f/unit 160.00 40 Acres 18. Distance from proposed location* to nearest well, drilling, completed, 20. BLM/BIA Bond No. on file 19. Proposed Depth applied for, on this lease, ft. Approx. 1445 UTU0056 6500 Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start* 23. Estimated duration 5070' GL 1st Quarter 2005 Approximately seven (7) days from spud to rig release. 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form: .1. Well plat certified by a registered surveyor. 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 2. A Drilling Plan. Operator certification. A Surface Use Plan (if the location is on National Forest System Lands, the Such other site specific information and/or plans as may be required by the SUPO shall be filed with the appropriate Forest Service Office). authorized officer. 25. Signature Name (Printed/Typed) Mandie Crozier Title Name (Printed/Typed) Office Mineral Resources Application approval does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on reverse)

RECEIVED

APR 0 1 2005

DIV. OF OIL, GAS & MINING

CONDITIONS OF APPROVAL ATTACHED

UDD6/8) IOTICE OF APPROVAL

11 11 4 4 22

COAs Page 1 of 2 Well No.: Federal 14-34-8-17

CONDITIONS OF APPROVAL APPLICATION FOR PERMIT TO DRILL

Company/Operator:

Inland Production Company

Well Name & Number: Federal 14-34-8-17

API Number:

43-013-32629

Lease Number:

U-79017

Location:

SESW Sec. 34 T.8S R. 17E

Agreement:

N/A

For more specific details on notification requirements, please check the Conditions of Approval for Notice to Drill and Surface Use Program.

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Be aware fire restrictions may be in effect when location is being constructed and/or when well is being drilled. Contact the appropriate Surface Management Agency for information.

Please submit to this office, in LAS format, an electronic copy of all logs run on this well This submission will replace the requirement for submittal of paper logs to the BLM.

In the event after-hours approvals are necessary, you must contact one of the following individuals:

Kirk Fleetwood

(435) 828-7874

Petroleum Engineer

Michael Lee

(435) 828-7875

Petroleum Engineer

BLM FAX Machine (435) 781-4410

COAs Page 2 of 2 Well No.: Federal 14-34-8-17

CONDITIONS OF APPROVAL FOR THE SURFACE USE PROGRAM OF THE APPLICATION FOR PERMIT TO DRILL

Company/Operator:

Inland Production Company

API Number:

43-013-32629

Well Name & Number: Federal 14-34-8-17

Lease Number:

<u>U-77234</u>

Location:

<u>SESW</u> Sec. <u>33</u> T. <u>8 S.</u> R. <u>17 E.</u>

Surface Ownership:

<u>BLM</u>

Date NOS Received:

None None

Date APD Received:

<u>8-6-04</u>

None. All conditions are covered in the APD.



United States Department of the Interior



BUREAU OF LAND MANAGEMENT Utah State Office P.O. Box 45155 Salt Lake City, UT 84145-0155 http://www.blm.gov

IN REPLY REFER TO: 3106 (UT-924)

September 16, 2004

Memorandum

To:

Vernal Field Office

From:

Acting Chief, Branch of Fluid Minerals

Subject:

Merger Approval

Attached is an approved copy of the name change recognized by the Utah State Office. We have updated our records to reflect the merger from Inland Production Company into Newfield Production Company on September 2, 2004.

Milas Llouters

Michael Coulthard Acting Chief, Branch of Fluid Minerals

Enclosure

1. State of Texas Certificate of Registration

cc:

MMS, Reference Data Branch, James Sykes, PO Box 25165, Denver CO 80225 State of Utah, DOGM, Attn: Earlene Russell, PO Box 145801, SLC UT 84114

Teresa Thompson Joe Incardine Connie Seare

•	•				
UTSL-	15855	61052	73088	76561	
071572A	16535	62848	73089	76787	
065914	16539	63073B	73520A	76808	
	16544	63073D	74108	76813	
	17036	63073E	74805	76954	
	17424	63073O	74806	76956	
	18048	64917	74807	77233	
UTU-	18399	64379	74808	77234	
	19267	64380	74389	77235	
02458	26026A	64381	74390	77337	
03563	30096	64805	74391	77338	
03563A	30103	64806	74392	77339	
04493	31260	64917	74393	77357	
05843	33992	65207	74398	77359	
07978	34173	65210	74399	77365	
09803	34346	65635	74400	77369	
017439B	36442	65967	74404	77370	
017985	36846	65969	74405	77546	
017991	38411	65970	74406	77553	
017992	38428	66184	74411	77554	
018073	38429	66185	74805	78022	
019222	38431	66191	74806	79013 ⁻	
020252	39713	67168	74826	79014	
020252A	39714	67170	74827	79015	
020254	40026	67208	74835	79016	•
020255	40652	67549	74868	79017	
020309D	40894	67586	74869	79831	
022684A	41377	67845	74870	79832	
027345	44210	68105	74872	79833 [,]	
034217A	44426	68548	74970	79831	
035521	44430	68618	75036	79834	
035521A	45431	69060	75037	80450	
038797	47171	69061	75038	80915	
058149	49092	69744	75039	81000	
063597A	49430	70821	75075		
075174	49950	72103	75078		
096547	50376	72104	75089		
096550	50385	72105	75090		
	50376	72106	75234		
	50750	72107	75238		
10760	51081	72108	76239	•	
11385	52013	73086	76240		
13905	52018	73087	76241		
15392	58546	73807	76560		
•		-	· · · · · · · · · · · · · · · · · · ·		

63073X 63098A 68528A 72086A 72613A 73520X 74477X 75023X 76189X 76331X 76788X 77098X 77107X 77236X 77376X 78560X 79485X 79641X 80207X 81307X





Office of the Secretary of State

The undersigned, as Secretary of State of Texas, does hereby certify that the attached is a true and correct copy of each document on file in this office as described below:

Newfield Production Company Filing Number: 41530400

Articles of Amendment

September 02, 2004

In testimony whereof, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in Austin, Texas on September 10, 2004.





Secretary of State

ARTICLES OF AMENDMENT TO THE ARTICLES OF INCORPORATION OF INLAND PRODUCTION COMPANY

In the Office of the Secretary of State of Texas

SEP 02 2004

Corporations Section

Pursuant to the provisions of Article 4.04 of the Texas Business Corporation Act (the "TBCA"), the undersigned corporation adopts the following articles of amendment to the articles of incorporation:

ARTICLE 1 - Name

The name of the corporation is Inland Production Company.

ARTICLE 2 - Amended Name

The following amendment to the Articles of Incorporation was approved by the Board of Directors and adopted by the shareholders of the corporation on August 27, 2004.

The amendment alters or changes Article One of the Articles of Incorporation to change the name of the corporation so that, as amended, Article One shall read in its entirety as follows:

"ARTICLE ONE - The name of the corporation is Newfield Production Company."

ARTICLE 3 - Effective Date of Filing

This document will become effective upon filing.

The holder of all of the shares outstanding and entitled to vote on said amendment has signed a consent in writing pursuant to Article 9.10 of the TBCA, adopting said amendment, and any written notice required has been given.

IN WITNESS WHEREOF, the undersigned corporation has executed these Articles of Amendment as of the 1st day of September, 2004.

INLAND RESOURCES INC.

By: Susan G. Riggs, Treasurer

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET 006

Change of Operator (Well Sold)

ROUTING 1. GLH 2. CDW 3. FILE

Designation of Agent/Operator

X Operator Name Change

Merger

The operator of the well(s) listed below has changed, effective:			9/1/2004						
FROM: (Old Operator):				TO: (New O	perator):		•		7
N5160-Inland Production Company			•	N2695-Newfie		on Compan	y		İ
Route 3 Box 3630				Route 3	Box 3630	-	-		
Myton, UT 84052				Myton,	UT 84052				
Phone: 1-(435) 646-3721				Phone: 1-(435)	646-3721				
CA	A No.			Unit:	<u> </u>				
WELL(S)									
NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS	
FEDERAL 15-34-8-17	34	080S	170E	4301332628		Federal	OW	APD	K
FEDERAL 14-34-8-17	34	080S	170E	4301332629		Federal	ow	APD	K
FEDERAL 13-34-8-17	34	080S	170E	4301332630		Federal	OW	APD	K
FEDERAL 12-34-8-17	34	080S	170E	4301332631		Federal	OW	APD	K
FEDERAL 16-13-9-16	13	090S	160E	4301332647		Federal	OW	APD	K
FEDERAL 15-13-9-16	13	090S	160E	4301332648		Federal	OW	APD	K
FEDERAL 14-13-9-16	13	090S	160E	4301332649		Federal	ow	APD	K
FEDERAL 13-13-9-16	13 -	090S	160E	4301332650		Federal	OW	NEW	K
FEDERAL 12-13-9-16	13	090S	160E	4301332651		Federal	ow	APD	K
FEDERAL 11-13-9-16	13	090S	160E	4301332652		Federal	OW	APD	K
FEDERAL 10-13-9-16	13	090S	160E	4301332653		Federal	OW	APD	K
FEDERAL 9-13-9-16	13	090S	160E	4301332654		Federal	OW	APD	K
FEDERAL 8-13-9-16	13	090S	160E	4301332655		Federal	OW	APD	K
FEDERAL 7-13-9-16	13	090S	160E	4301332656		Federal	OW	APD	K
FEDERAL 11-20-9-16	20	090S	160E	4301332598		Federal	OW	APD	K
FEDERAL 1-22-9-16	22	090S	160E	4301332612		Federal	OW	NEW	K
FEDERAL 9-10-9-17	10	090S	170E	4301332502	14325	Federal	OW	DRL	K
FEDERAL 13-11-9-17	11	090S	170E	4301332510	14273	Federal	OW	P	K
FEDERAL 12-11-9-17	11	090S	170E	4301332544		Federal	OW	APD	K
FEDERAL 1-15-9-17	15	090S	170E	4301332596		Federal	ow	APD	K
							<u> </u>		4

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

(R649-8-10) Sundry or legal documentation was received from the FORMER operator on: 9/15/2004 9/15/2004 (R649-8-10) Sundry or legal documentation was received from the NEW operator on:

The new company was checked on the Department of Commerce, Division of Corporations Database on: 2/23/2005

Is the new operator registered in the State of Utah: YES Business Number:

If NO, the operator was contacted contacted on:

755627-0143

6a. (R649-9-2)Waste Management Plan has been received on:	IN PLACE		
6b. Inspections of LA PA state/fee well sites complete on:	waived		
			14 · ·
7. Federal and Indian Lease Wells: The BLM and or t	the BIA has appre	oved the merger,	name change,
or operator change for all wells listed on Federal or Indian lea	ses on:	BLM	BIA
8. Federal and Indian Units:	· ·		
The BLM or BIA has approved the successor of unit operate	or for wells listed on	n: <u>n/a</u>	
 Federal and Indian Communization Agreement The BLM or BIA has approved the operator for all wells lis 		na/	_
10. Underground Injection Control ("UIC") The Inject, for the enhanced/secondary recovery unit/project for the inject.			ansfer of Authority to 2/23/2005
DATA ENTRY:			
1. Changes entered in the Oil and Gas Database on:	2/28/2005		
2. Changes have been entered on the Monthly Operator Change	ge Spread Sheet on:	2/28/200	25_
3. Bond information entered in RBDMS on:	2/28/2005		
4. Fee/State wells attached to bond in RBDMS on:	2/28/2005		
5. Injection Projects to new operator in RBDMS on:	2/28/2005		
6. Receipt of Acceptance of Drilling Procedures for APD/New of	on:	waived	
FEDERAL WELL(S) BOND VERIFICATION:			
1. Federal well(s) covered by Bond Number:	<u>UT 0056</u>		
INDIAN WELL(S) BOND VERIFICATION:	61BSBDH2912		
1. Indian well(s) covered by Bond Number:			
FEE & STATE WELL(S) BOND VERIFICATION 1. (R649-3-1) The NEW operator of any fee well(s) listed cover		61BSBDH2	2919
2. The FORMER operator has requested a release of liability from The Division sent response by letter on:	m their bond on:	n/a*	
LEASE INTEREST OWNER NOTIFICATION:			
 (R649-2-10) The FORMER operator of the fee wells has been of their responsibility to notify all interest owners of this change 		med by a letter fromn/a	the Division
COMMENTS:	, 37 M 44 P	1	12/22/07
*Bond rider changed operator name from Inland Production Comp	oany to Newfield Pro	oduction Company -	received 2/23/05
			

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Co	ompany:	<u>N</u>	<u>IEWFIE</u>	LD PR	RODUCTIO	<u>ON CO.</u>	<u>MPANY</u>	
Well Name:		<u>F</u>	EDERA	L 14-3	4-8-17			
Api No <u>:</u>	43-013-32	2629	L	ease Ty	/pe:	FEI	DERAL	
Section 34	_Township_	08S	_Range_	17E	_County	DU	CHESNE	
Drilling Cor	ntractor	ROS	S DRIL	LING	RIC	G#	24	
SPUDDE	ED:							
	Date	04/2	2/05					
	Time	8:0	O AM					
	How	DR	<u>Y</u>					
Drilling w	ill Comme	ence:_						
Reported by	7	FLO	OYD MI	TCHE]	LL			
Telephone #	<u> </u>	1-43	<u>85-823-3</u>	610				
Date0	04/22/2005		Signed		CHD			

RECEIVED

APR 2 / 2005

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STATE OF UTAH
DIVISION OF OIL, GAS AND MIMINS
ENTITY ACTION FORM FORM 6

DIV. OF OIL, GAS & MINING

OPERATOR: NEWFIELD PRODUCTION COMPANY
RT. 3 BOX 3630
MYTON, UT 84052

OPERATOR ACCT. NO. N2695

	40									=		
	ACTION CODE	CURRENT	NEW.	APT NUMBER	WEST WAWE							
	CODE	ENTITY NO.	ENTITY NO.		The state of the s				LOCATION		SPUD	
	1		1			QQ	ac_	TP.	RG	COUNTY	DATE	EFFECTIVE
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C) Per acting well from one existing entity to a new entity								Kebble S. Jones				
CD Fo Office (contribute comments and contribute contri												
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<u>~</u> №	OTE: Use	COMMENT section	i le explain why each Act	Of Code unit and and						roduction Clerk		April 27, 2006
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	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT			FORM APPROVED. OMB No. 1004-0135 Expires January 31,2004			
A A A				5. Lease Serial N			
Do not use t	' NOTICES AND REPORTS (his form for proposals to drill o	or to re-enter an		UTU79017			
abandoned w	ell. Use Form 3160-3 (APD) for	such proposals	i.	6. If Indian, Alloi	tee or Tribe Name.		
SUBMIT IN TI	RIPLICATE - Other Instruction	ons on reverse si	de	7. If Unit or CA/	Agreement, Name and/or h	vo.	
				GREATER BO	UNDARY II	•	
1. Type of Well X Oil Well Gas Well	Other			8. Well Name and	1 No		
2. Name of Operator				FEDERAL 14-			
Newfield Production Company 3a. Address Route 3 Box 3630	2h Di	none No. (include are	anda)	9. API Well No.			
Myton, UT 84052		46.3721	codej	4301332629 10. Field and Poo	l, or Exploratory Area		
4. Location of Well (Footage, Sec.	., T., R., M., or Survey Description)	-		Monument But			
660 FSL 1979 FWL				11. County or Par	I. County or Parish, State		
SE/SW Section 34 T8S R1	7E		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		
12. CHECK	APPROPRIATE BOX(ES) TO	INIDICATE NA	TURE OF NO	OTICE, OR O	THER DATA		
TYPE OF SUBMISSION		TYPl	E OF ACTION				
	Acidize I	Deepen	☐ Production	n(Start/Resume)	Water Shut-Off		
X Notice of Intent		Fracture Treat	Reclamati	•	Well Integrity		
Subsequent Report	Casing Repair	New Construction	Recomple	te	X Other		
Final Abandonment Notice	-	Plug & Abandon	-	ily Abandon	Change of Name		
1 mai Abandonnicht ivouce	Convert to Injector	Plug Back	Water Dis	posal		<u></u>	
Effective April 27, 2005 Nev Boundary Federal 14-34-8-	wfield Production Company is cha	anging the name	of the Federal	14-34-8-17 to	the Greater		
					Constitution of the Consti	RECEIVED	
						APR 2 8 2005	
					DIV. (DE OIL, GAS & MINING	
I hereby certify that the foregoing is Name (Printed/Typed)	true and correct	Title				,	
Mandie Crozier		Regulatory Specia	ılist				
Signature		Date					
-/ lamp	TH OS SPACE FOR FE	04/27/2005	ATE OFFICE	7 FIGE			
	THIS STATE FUR PE	DENAL VIX 31.	ALE VEFICE	z word			
Approved by		Title		Dat	e		
Conditions of approval, if any, are attached	ed. Approval of this notice does not warrant or quitable title to those rights in the subject lease uct operations thereon.			•			
	U.S.C. Section 1212, make it a crime for any statements or representations as to any matter		villfully to make to a	any department or ag	ency of the United		

(Instructions on reverse)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT



FORM APPROVED OMB No. 1004-0135 Expires January 31,2004

Lease	Serial	No.	

SUNDRY	NOTICES AND REPORTS O	N WELLS	U'.	ΓU79017	
Do not use the abandoned we	nis form for proposals to drill or ell. Use Form 3160-3 (APD) for	such proposals.	6. If	Indian, Allottee o	or Tribe Name.
SUBMIT IN TI	RIPLICATE - Other Instruction	is on reverse side		Unit or CA/Agre EATER BOUND	ement, Name and/or No. DARY II
i. Type of Well Gas Well	Other		8. W	ell Name and No	
Name of Operator Newfield Production Company				DERAL 14-34-8	-17
3a. Address Route 3 Box 3630	3b. Pho	one No. (include are code)		PI Well No. 01332629	
Myton, UT 84052	435.64	6.3721		Field and Pool, or onument Butte	Exploratory Area
4. Location of Well (Footage, Sec 660 FSL 1979 FWL	., 1., R., M., or Survey Description)			County or Parish,	State
SE/SW Section 34 T8S R1	7E		Dı	chesne,UT	
12. CHECK	APPROPRIATE BOX(ES) TO 1	INIDICATE NATUR	RE OF NOTIO	CE, OR OTHE	R DATA
TYPE OF SUBMISSION		TYPE OF	ACTION		
■ Notice of Intent Subsequent Report Final Abandonment Notice	Alter Casing Fr Casing Repair No Change Plans Pl	acture Treat Ew Construction ug & Abandon ug Back	Production(Star Reclamation Recomplete Temporarily Al Water Disposal	oandon	Water Shut-Off Well Integrity Other Spud Notice
inspection.) On 4/22/2005 MIRU Ross csgn. Set @ 313.34'/ KB C ppg > 1.17 cf/ sk yeild. Ret	only after all requirements, including reclamation only after all requirements, including reclamation of the second of the secon	rill 303' of 12 1/4" hole s of class "G" w/ 3% (C.	e with air mist	. TIH W/ 7 Jt's	s 8 5/8" J-55 24 #
I hereby certify that the foregoing is Name (Printed/Typed)	true and correct	Title			
Floyd Mitchell Signature	,	Drilling Supervisor Date			
Signature of the	theel	04/26/2005			
7 (A)	THIS SPACE FOR FEI	ERAL OR STATE	OFFICE US	SE .	
Approved by		Title		Date	
	ed. Approval of this notice does not warrant or quitable title to those rights in the subject lease luct operations thereon.	Office		127	DECENTER
Title 18 U.S.C. Section 1001 and Title 43	3 U.S.C. Section 1212, make it a crime for any p statements or representations as to any matter w	erson knowingly and willfully within its jurisdiction	y to make to any de	partment or agency	of the United

			AT 313.34'		OPERATOR	`	Mewileiu F	roduction C	Unipany
DATUM	12' KB				WELL		Federal 14	-34-8-17	· ·
DATUM TO	CUT OFF C	ASING _			FIELD/PRO	SPECT	Monument	t Butte	
DATUM TO	BRADENHE	AD FLANGE			CONTRACT	OR & RIG#		Ross Rig#	24
TD DRILLER	303'	LOGGI	ER						
HOLE SIZE	12 1/4	4							
LOG OF CA	SING STRIN	NG:							
PIECES	OD	ITEM -	MAKE - DESCI	RIPTION	WT / FT	GRD	THREAD	CONDT	LENGTH
		Shoe	Joint 42.58'						
		WHI - 92 cs	g head				8rd	Α	0.95
7	8 5/8"	Maverick S7	&C csg	. <u>-</u>	24#	J-55	8rd	Α	301.49
	<u></u>		GUIDE	shoe			8rd	Α	0.9
CASING IN	VENTORY B	AL.	FEET	JTS	TOTAL LEN	GTH OF ST	RING		303.34
TOTAL LEN	GTH OF ST	RING	303.34	. 7	LESS CUT OFF PIECE				2
LESS NON	CSG. ITEMS	3	1.85		PLUS DATUM TO T/CUT OFF CSG				12
PLUS FULL	JTS. LEFT	TUC	0		CASING SET DEPTH3				
	TOTAL		301.49	7	- 11				
TOTAL CSC	6. DEL. (W/C	THRDS)	301.49	7	COMPARE				
TIMING			1ST STAGE		1				•
BEGIN RUN	CSG.	Spud	4/22/2005	8:00 AM	GOOD CIRC THRU JOB Yes				
CSG. IN HC	LE		4/25/2005	9:00 AM	Bbls CMT CIRC TO SURFACE 7				
BEGIN CIRC	<u> </u>		4/26/2005	12:36 PM	RECIPROCATED PIPE FORN/A				
BEGIN PUN	IP CMT		4/26/2005	12:43 PM			· <u> </u>		
BEGIN DSP	L. CMT		4/26/2005	12:55 PM	BUMPED PLUG TO 525 P				
PLUG DOW	N		4/26/2005	1:02 PM					
CEMENT U	SED			CEMENT CO	MPANY-	B. J.		<u> </u>	
STAGE	# SX	· ·		CEMENT TY	PE & ADDITIV	/ES		 -	<u> </u>
11	160	Class "G" w	2% CaCL2 + 1	I/4#/sk Cello-F	lake mixed @	15.8 ppg 1.	17 cf/sk yield		
									
CENTRALIZ	ER & SCRA	TCHER PLAC	EMENT			SHOW MAK	E & SPACIN	G	
Centralizer	s - Middle f	irst, top seco	ond & third for	3					

COMPANY REPRESENTATIVE Floyd Mitchell

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0135 Expires January 31,2004

SUNDRY NOTICES AND REPORTS ON WELLS	
Do not use this form for proposals to drill or to re-enter an	
abandoned well. Use Form 3160-3 (APD) for such proposals	

Lease Serial No.

Do not use	this form for proposals to	drill or to re-enter an		010/901/	
abandoned	well. Use Form 3160-3 (AF	PD) for such proposals	i.	6. If Indian, Allo	ottee or Tribe Name.
SUBMIT IN	TRIPLICATE - Other Ins	tructions on reverse si	de	8	Agreement, Name and/or No.
1. Type of Well				GREATER BO	UNDARY II
2. Name of Operator	Other			8. Well Name an	d No.
Newfield Production Company				GRTR BNDRY	Y FED 14-34-8-17
3a. Address Route 3 Box 3630		3b. Phone No. (include are	code)	 API Well No. 4301332629 	
Myton, UT 84052		435.646.3721			ol, or Exploratory Area
4. Location of Well (Footage, Se	ec., T., R., M., or Survey Description	on)		Monument But	te
SE/SW Section 34 T8S R	.17E			11. County or Par	rish, State
				Duchesne, UT	
12. CHEC	K APPROPRIATE BOX(E	S) TO INIDICATE NA	TURE OF NO	TICE, OR OT	THER DATA
TYPE OF SUBMISSION		TYPE	OF ACTION		
■ Notice of Intent	☐ Acidize	Deepen	☐ Production	(Start/Resume)	■ Water Shut-Off
	Alter Casing	Fracture Treat	Reclamatio	• ,	Well Integrity
X Subsequent Report	Casing Repair	New Construction	Recomplete	•	X Other
Final Abandonment Notice	Change Plans Convert to Injector	Plug & Abandon	Temporaril	•	Weekly Status Report
13. Describe Proposed or Completed C	<u>. </u>	Plug Back	Water Disp		
KB. Cement with 375 sks of	7.875 hole with fresh water face. PU & TIH with Guide s sement mixed @ 11.0 ppg & re pit. Nipple down Bop's. D	noe, shoe jt, float collar, 3.43 vld. The 475 sks c	139 jt's of 5.5 ement mixed	J-55, 15.5# cs	sgn. Set @ 6121.43/
hereby certify that the foregoing is	frue and correct	Trick			
Iame (Printed/ Typed) Don Bastian		Title			
ignature		Drilling Foreman Date			
Non Bose	ian	08/26/2005			
	THIS SPACE FOR	FEDERAL OR STAT	TE OFFICE	USE	
pproved by		Trial			
onditions of approval, if any, are attache	rd. Approval of this notice does not was	Title Title		Date	
rtify that the applicant holds legal or eq hich would entitle the applicant to cond	uitable title to those rights in the subject	lease Office			
tle 18 U.S.C. Section 1001 and Title 43	U.S.C. Section 1212, make it a crime for	or any person knowingly and will	ully to make to any	department or access	cy of the United
ntes any false, fictitious and fraudulent :	statements or representations as to any r	natter within its jurisdiction			
			CEAL S	MAN APPROXIMATE IN CASE AND ADDRESS.	. ,

RECEIVED

AUG 3/1 2005

NEWFIELD PRODUCTION COMPANY - CASING & CEMENT REPORT

			5 1/2"	CASING SET	AT	6121.43			
					Fit clir @	6077'			
LAST CASIN	G <u>8 5/8"</u>	SET A	AT 31 <u>4'</u>		OPERATOR	₹	Inland Pro	duction Con	npany
DATUM	12' KB			"	WELL	GBU 14-34	l-8-17		
DATUM TO (CUT OFF CA	ASING _	12'		FIELD/PRO	SPECT	Monumen	Butte	·····
DATUM TO E	DATUM TO BRADENHEAD FLANGE CONTRACTOR & RIG # Union Rig #14						‡14		
TD DRILLER	6130'	Loggers TD	6130						
HOLE SIZE	7 7/8"			<u>-</u>					
LOG OF CAS	SING STRIN	G:						· · · · · · · · · · · · · · · · · · ·	
PIECES	OD	ITEM -	MAKE - DESCI	RIPTION	WT / FT	GRD	THREAD	CONDT	LENGTH
		Landing Jt							14
	SHJT	6.30' @ 395	9'						
138	5 1/2"	ETC LT & C	casing	<u> </u>	15.5#	J-55	8rd	Α	6063.92
		Float collar							0.6
1	5 1/2"	ETC LT&C	csg		15.5#	J-55	8rd	Α	44.26
	-		GUIDE	shoe			8rd	Α	0.65
CASING INVENTORY BAL. FEET JTS					TOTAL LENGTH OF STRING 6123.43				
TOTAL LENG	TH OF STE	RING	6123.43	139	LESS CUT OFF PIECE 14				
LESS NON C	SG. ITEMS		15.25		PLUS DATUM TO T/CUT OFF CSG 1				
PLUS FULL .	JTS. LEFT C	DUT	221.39	5	CASING SET DEPTH 6121.43				
	TOTAL		6329.57	144	<u> </u>				
TOTAL CSG.	DEL. (W/O	THRDS)	6329.57	144	∫ COMPAF	RE			
TIMING			1ST STAGE	2nd STAGE]				
BEGIN RUN	CSG.		8:30am	8/25/2005	GOOD CIRC	THRU JOB		Yes	
CSG. IN HOL	.E	_	11:30am	8/25/2005	Bbls CMT CIRC TO SURFACE 19				
BEGIN CIRC			12:00pm	8/25/2005	RECIPROCA	ATED PIPE I	OR	THRUSTROK	<u>E_</u>
BEGIN PUMI	CMT		2:00pm	8/25/2005	DID BACK F	PRES. VALVI	EHOLD? _		
BEGIN DSPL	CMT		2:53pm	8/25/2005	BUMPED PI	LUG TO		2227	PSI
PLUG DOWN	1		3:15	8/25/2005					
CEMENT US	ED		4	CEMENT CO	MPANY-	B. J.		_	
STAGE	# SX			CEMENT TYP	E & ADDITIV	/ES			
1	375	Premlite II w	/ 10% gel + 3 °	% KCL, 3#'s /sl	k CSE + 2# sl	k/kolseal + 1/	4#'s/sk Cello	Flake	
		mixed @ 11	.0 ppg W / 3.43	cf/sk yield					
2	475	50/50 poz V	// 2% Gel + 3%	KCL, .5%EC1	,1/4# sk C.F.	2% gel. 3% \$	SM mixed @	14.4 ppg W/ 1	24 YLD
CENTRALIZI	R & SCRAT	CHER PLAC	CEMENT			SHOW MAK	E & SPACIN	G	
Centralizers	- Middle fi	rst, top seco	ond & third. Th	nen every thir	d collar for a	a total of 20	·		

COMPANY REPRESENTATIVE Don Bastian

RECEIVED

DATE ___8/25/2005_

AUG 3/1 2005

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM A	PPROVED
OMB No.	1004-0135
Evniree Ian	nary 31 200

5.	Lease Serial No.		
1	UTU79017		

Do not use this form for proposals to drill or to re-enter an					UTU79017		
	vell. Use Form 3160-3 (APD)			6. If Indian, Allot	tee or Tribe Name.		
SURMIT IN T	RIPLICATE - Other Instru	tions on reverse s	ide	7 If I hit or CA/	Agreement, Name and/	n Ma	
50 5000	ini	citoria da reserve a	ilus.		,	or ino.	
1. Type of Well				GREATER BO	UNDARY II		
X Oil Well Gas Well	Other			8. Well Name and	1 No		
2. Name of Operator				-1	FED 14-34-8-17		
Newfield Production Company				9. API Well No.	122 110 10 17		
3a. Address Route 3 Box 3630	38	. Phone No. (include at	re code)	4301332629			
Myton, UT 84052	43	35.646.3721			l, or Exploratory Area		
4. Location of Well (Footage, Se	c., T., R., M., or Survey Description)			Monument Butt			
660 FSL 1979 FWL				11. County or Par	rish, State		
SE/SW Section 34 T8S R	17E			TIM			
				Duchesne,UT			
12. CHECI	X APPROPRIATE BOX(ES)	TO INIDICATE N	ATURE OF N	OTICE, OR OT	THER DATA	·	
TYPE OF SUBMISSION		TYI	PE OF ACTION	<u> </u>		_	
	Acidize	Deepen	Production	n(Start/Resume)	☐ Water Shut-Off		
X Notice of Intent	Alter Casing	Fracture Treat	Reclamat		Well Integrity		
D suture + B	Casing Repair	New Construction	Recomple		=		
Subsequent Report	Change Plans	Plug & Abandon		rily Abandon	Other		
Final Abandonment Notice	Convert to Injector	Plug Back	=======================================	•		· · · · · · · · · · · · · · · · · · ·	
	Convert to injector	ring back	X Water Dis	sposar			
Ashley, Monument Butte, or produced water is injected	ed to a steel storage tank. If the Jonah, and Beluga water inject into approved Class II wells to criteria, is disposed at Newfield facilities.	ion facilities by con enhance Newfield d's Pariette #4 dispo	npany or contra 's secondary re osal well (Sec.	act trucks. Subsecovery project.	equently, the or at State of Utah		
I hereby certify that the foregoing i	s true and correct	Title			·		
Name (Printed/Typed)							
Mandie Crozier		Regulatory Spec	nalist				
Signature	non	Date 09/19/2005					
15.000 10.000 10.00	THIS SPACE FOR	FEDERAL OR ST	TATE OFFIC	E USE			
				I			
Approved by		Title		Dat	te		
	hed. Approval of this notice does not warra						
certify that the applicant holds legal or e	quitable title to those rights in the subject l		e (************************************	No. 5 to 15 James on the			
which would entitle the applicant to con	duct operations thereon.			<u> VED</u>			
	3 U.S.C. Section 1212, make it a crime for		willfully to make to	any department or ago	ency of the United		
States any false, fictitious and fraudulen	t statements or representations as to any ma	tter within its jurisdiction	SEP :	2 0 2005			
(Instructions on reverse)			- 1000 9	- 4 FAAA			

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

FORM A	PPROVED
OMB No.	1004-0135
Expires Jan	nary 31 2004

Lease Serial No. UTU79017

	0 2 0 1 2 0	.,		
-	TCT 1	1.11	m '1	3.T

	ોડ form for proposals to ell. Use Form 3160-3 (AP		5.	6. If Indian, Allot	tee or Tribe Name.
	RIPLICATE - Other Inst	ructions on reverse si	de	7. If Unit or CA/A	Agreement, Name and/or No. JNDARY II
l. Type of Well Cil Well Gas Well	Other			8. Well Name and	1 No.
2. Name of Operator Newfield Production Company				GRTR BNDRY	FED 14-34-8-17
3a. Address Route 3 Box 3630		3b. Phone No. (include are	: code)	9. API Well No. 4301332629	
Myton, UT 84052	T. D. M. G. D	435.646.3721			l, or Exploratory Area
4. Location of Well (Footage, Sec. 660 FSL 1979 FWL	, 1., R., M., or Survey Descriptio	n)		Monument Butt 11. County or Par	
SE/SW Section 34 T8S R1	Æ			Duchesne, UT	. The second of
12. CHECK	APPROPRIATE BOX(E	S) TO INIDICATE NA	TURE OF NO	OTICE, OR OT	HER DATA
TYPE OF SUBMISSION			E OF ACTION		
Notice of Intent Subsequent Report Final Abandonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injector	Deepen Fracture Treat New Construction Plug & Abandon Plug Back	Reclamati	te ly Abandon	Water Shut-Off Well Integrity Other Variance
	nardo or equivalent vent li ely low gas producers (20 r separation and sales. riance for safety reasons. (ef hatches are open. While	e from Onshore Order ne valves. Inland opera mcfpd). The majority of Crude oil production tare gauging tanks, lease of	43 CFR Part 3 tes wells that the wells are c ks equipped w perators will b	nas determined that the section 4 reproduce from the equipped with a with back pressu	requiring production ne Green River n three phase ure devices will emit
COPY SENT TO OPERATO Date: 9-92.05 Initials: CHO	The state of the s	Accepte Utah Dir Oil, Gas a Date: 7/20 By: 20	d by the vision of and Mining	T.	ederal Approval Of This Action is Necessary
I hereby certify that the foregoing is Name (Printed/Typed) Mandie Crozier	true and correct	Title Regulatory Specia	ılist	-	
Signature	110000	Date 09/19/2005			:
" " WITTH	THIS SPACE FO	R FEDERAL OR ST	ATE OFFICE	USE	
Approved by Conditions of approval, if any, are attached certify that the applicant holds legal or equinich would entitle the applicant to conditions.	uitable title to those rights in the subje		gree proc	Date	
Title 18 U.S.C. Section 1001 and Title 43 States any false, fictitious and fraudulent			villfully to make to a	ny department or ag	ncy of the United

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM A	PPROVED
OMB No.	1004-0135
Expires Jan	uary 31,200

Lease Serial No. SUNDRY NOTICES AND REPORTS ON WELLS

UTU79017

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.					6. If Indian, Allottee or Tribe Name.		
SUBMIT IN T	RIPLICATE - Other Instr	uctions on reverse side	e	7. If Unit or CA/A	agreement, Name and/or No. JNDARY II		
Oil Well Gas Well	Other			8. Well Name and	No. FED 14-34-8-17		
Name of Operator Newfield Production Company				9. API Well No.	TED 14-34-6-17		
3a. Address Route 3 Box 3630		3b. Phone No. (include are c	ode)	4301332629			
Myton, UT 84052		435.646.3721		10. Field and Poo Monument Butt	l, or Exploratory Area		
4. Location of Well (Footage, Sec 660 FSL 1979 FWL	c., T., R., M., or Survey Description	n)		11. County or Par	·		
SE/SW Section 34 T8S R1	17E	······		Duchesne,UT			
12. CHECI	K APPROPRIATE BOX(ES	S) TO INIDICATE NAT	TURE OF NO	OTICE, OR OT	HER DATA		
TYPE OF SUBMISSION		ТҮРЕ	OF ACTION				
☐ Notice of Intent ☐ Subsequent Report ☐ Final Abandonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injector	Deepen Fracture Treat New Construction Plug & Abandon Plug Back	Reclamation Recomple	te Ily Abandon	Water Shut-Off Well Integrity Other Weekly Status Report		
Abandonment Notices shall be filed inspection.) Status report for time period the well. A cement bond lowith 20/40 mesh sand. Per #3 (5097'-5105); Stage #4 JSPF. Composite flow-throwas moved over the well of the composite flow-throwas moved over the composite flow-throwas moved over the well of the composite flow-throwas moved over the c	on procedures intiated in the og was run and a total of six of orated intervals are as follo (4945'-4952'); Stage #5 (439 ough frac plugs were used be on 09-14-2005. Bridge plugs 1/2" bore rod pump was run	Green River formation of Green River intervals we was: Stage #1 (5793'-58'); etween stages. Fracs we were drilled out and wel	on 09-07-05 vere perforate (32'); Stage #6 (42') ere flowed ball was cleane	without the use d and hydraulic 2 (5654'-5668') 272'-4285'). All ack through cho d to 6076'. Zon	of a service rig over ally fracture treated (5614'-5632'); Stage perforations, were 4 okes. A service rig es were swab tested		
Name (Printed/ Typed) Lana Nebeker	Ω Ω	Production Clerk	· 				
Signature	Leleker	Date 10/07/2005					
01	THIS SPACE FO	R FEDERAL OR STA	TE OFFIC	E.USE .			
certify that the applicant holds legal or which would entitle the applicant to cor		ect lease Office	116.11	Dat			
	43 U.S.C. Section 1212, make it a crime at statements or representations as to any		muny to make to	any department or ag			

(Instructions on reverse)

OCT 1 1 2005

FORM 3160-4 (July 1992)

SUBMIT IN DUPLICATE* FORM APPROVED

(See other instructions ons reverse side)

ther in- OMB NO. 1004-0137

Expires: February 28, 1995

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

5. LEASE DESIGNATION AND SERIAL NO. UTU-79017

WELL COM	IPLETION	OR RECO	MPLETION	REPORT A	ND LOG*	6. IF INDIAN, ALLOTTEE	OR TRIBE NAME
1a. TYPE OF WORK						7. UNIT AGREEMENT N	AME
	OIL Well	X GAS		Other		Greater Bo	undary II Unit
1b. TYPE OF WELL	WEED.			_			,
						8. FARM OR LEASE NAM	ME, WELL NO.
NEW X WORL		PLU BAC	1 1 1	Othar		Greater Boundan	. Endoral 14 24 9 17
2. NAME OF OPERATOR		BAC	RESVR.	Other		9. WELL NO.	<u>/ Federal 14-34-8-17</u>
2. WANTE OF OFERATOR	Ne	wfield Explor	ation Compan	v			3-32629
3. ADDRESS AND TELEPHONE N		Wilold Exploi	attori o orinpari	,		10. FIELD AND POOL OR	
	1401 17th	St. Suite 100	00 Denver, Co	D 80202		Monun	nent Butte
4. LOCATION OF WELL (Rep					_	11. SEC., T., R., M., OR BI	OCK AND SURVEY
At Surface		L & 1979' FWL ((SE/SW) Sec. 34,	Twp 8S, Rng 17E	<u>.</u>	OR AREA	
At top prod. Interval reported be	elow					Sec. 34,	T8S, R17E
		_					
At total depth		14. API N	io. 13-013-32629	DATE ISSUED	3/17/04	12. COUNTY OR PARISH	13. STATE
15. DATE SPUDDED 16. DAT	TE T.D. REACHED		L. (Ready to prod.)		DF, RKB, RT, GR, ETC.)	Duchesne	19. ELEV. CASINGHEAD
4/22/05	8/24/05		9/16/05	5070		5082' KB	19. ELEV. CASINGHEAD
20. TOTAL DEPTH, MD & TVD		CK T.D., MD & TVD	22. IF MULTIP		23. INTERVALS	ROTARY TOOLS	CABLE TOOLS
			HOW MAN	Y*	DRILLED BY		
6130'		6076'			>	X	
24. PRODUCING INTERVAL(S), C	F THIS COMPLETION-	TOP, BOTTOM, NAM	IE (MD AND TVD)*				25. WAS DIRECTIONAL
		Greer	River 4272	2'-5802'			SURVEY MADE
				<u>_</u>	· · · · · · · · · · · · · · · · · · ·		No
26. TYPE ELECTRIC AND OTHER		and Done	ity Compone	stad Nautraa (OD Coliner C	Samont Dead Law	27. WAS WELL CORED
Dual Induction Guar	a, SP, Compe				•	ement Bond Log	No
23. CASING SIZE/GRADE	WEIGHT	_	EPTH SET (MD)	oort all strings set in the HOLE SIZE	r · '	NT. CEMENTING RECORD	AMOUNT PULLED
8-5/8" - J-55	24		313'	12-1/4"		h 160 sx Class "G" cmt	AMOUNT PULLED
5-1/2" - J-55	15.		6121'	7-7/8"		II and 475 sx 50/50 Poz	
29.	LIN	ER RECORD			30.	TUBING RECORD	
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-7/8"	EOT @	TA @
						5867'	5769'
31. PERFORATION RECORD (In			SPF/NUMBE	R DEPTH INT		RACTURE, CEMENT SQUE AMOUNT AND KIND OF	
<u>INTERVA</u>	<u>.L</u> CP4) 5793'- 5802'	<u>SIZE</u> .41"	4/36	5793'-		Frac w/ 23,996# 20/40 s	
(CP1&2) 5614'-56	,	.43"	4/128	5614'-		Frac w/ 109,397# 20/40 s	***
	(B2) 5097'-5105'	.43"	4/32	5097'-		Frac w/ 40,176# 20/40 s	
<u> </u>	(C) 4945'-4952'	.43"	4/28	4945'-		Frac w/ 23,937# 20/40 s	
(DD7) 4000(4)							
	386', 4390'-4394'	.43"	4/40	4380'-		Frac w/ 54,421# 20/40 sa	
((6B4) 4 272'-4 285'	.43"	4/52	4272'-	4285	Frac w/ 59,213# 20/40 s.	and in 652 bbis fluid
<u></u>					L		
33.* DATE FIRST PRODUCTION	PROPUGTIC	NACTUOD (Flaming)		CTION		WELL C.	CASITIO (Dec Assistance observing)
9/16/05	PRODUCTIC	.01/2"2-1/2	gas lift, pumpingsize an x 1-1/2" x 15'	RHAC SM Plu	nger Pump		TATUS (Producing or shut-in)
DATE OF TEST	HOURS TESTED	CHOKE SIZE		OILBBLS.	GASMCF.	WATERBBL.	GAS-OIL RATIO
			TEST PERIOD				
10 day ave			>	104	9	70	87
FLOW. TUBING PRESS.	CASING PRESSUR	E CALCULATED 24-HOUR RATE	OIL-BBL.	GASMCF.	V	VATERBBL. OIL GRAVI	TY-API (CORR.)
	1	>			RECEIV	/FD	
34. DISPOSITION OF GAS (Sold, u	sed for finel vanted otc.)				1 1 to 1 1	TEST WITNESSED BY	
J. DIOLOGITION OF ONG (3010. II	see an rues, venteu, etc.)	Sold & Use	ed for Fuel		nct 2 4 2	2005	
		OO14 & O36				4444	
35. LIST OF ATTACHMENTS				•		.005	
	gyng and attacked in			nined from all availab			
36. I hereby certify that the force	gging and attacked in	innation is comple		DIN mined from all availab Regu		k MINING	10/21/2005

coveries); FORMATION	TOP	воттом	DESCRIPTION, CONTENTS, ETC.		то	Р
				NAME		TRUE
					MEAS. DEPTH	VERT. DE
			Well Name	Garden Gulch Mkr	3785'	
		1	Greater Boundary Federal 14-34-8-17	Garden Gulch 1	3968'	
				Garden Gulch 2	4085'	
		1		Point 3 Mkr	4339'	
				X Mkr	4586'	
		1		Y-Mkr	4619'	
				Douglas Creek Mkr	4753'	
				BiCarbonate Mkr	4994'	
				B Limestone Mkr	5141'	
		! !		Castle Peak Basal Carbonate	5575' 5996'	
				Total Depth (LOGGERS		
				Total Depth (LOGGERS	6130	
		1				
		1				
				1		

Sundry Number: 31289 API Well Number: 43013326290000

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCE		FORM 9			
	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-79017					
SUNDF	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:					
	oposals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.		7.UNIT or CA AGREEMENT NAME: GMBU (GRRV)			
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: BOUNDARY FED 14-34-8-17			
2. NAME OF OPERATOR: NEWFIELD PRODUCTION CO	OMPANY		9. API NUMBER: 43013326290000			
3. ADDRESS OF OPERATOR: Rt 3 Box 3630 , Myton, UT	r, 84052 435 646-4825	PHONE NUMBER: 5 Ext	9. FIELD and POOL or WILDCAT: MONUMENT BUTTE			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0660 FSL 1979 FWL			COUNTY: DUCHESNE			
QTR/QTR, SECTION, TOWNSI Qtr/Qtr: SESW Section: 3	HIP, RANGE, MERIDIAN: 34 Township: 08.0S Range: 17.0E Merid	lian: S	STATE: UTAH			
11. CHEC	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR			
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	✓ CHANGE WELL NAME			
	✓ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION			
10/19/2012	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK			
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL			
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION			
	WILDCAT WELL DETERMINATION	OTHER	OTHER:			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. The subject well has been converted from a producing oil well to an injection well on 10/16/2012. On 10/18/2012 Jason Deardorff with the EPA was contacted concerning the initial MIT on the above listed well. On 10/19/2012 the casing was pressured up to 1305 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 300 psig during the test. There was not an EPA representative available to witness the test. EPA# UT22219-09423						
NAME (PLEASE PRINT) Lucy Chavez-Naupoto	PHONE NUMB 435 646-4874	ER TITLE Water Services Technician				
SIGNATURE N/A		DATE 10/23/2012				

Sundry Number: 31289 API Well Number: 43013326290000

Mechanical Integrity Test Casing or Annulus Pressure Mechanical Integrity Test U.S. Environmental Protection Agency Underground Injection Control Program 999 18th Street, Suite 500 Denver, CO 80202-2466

EPA Witness: 8			Date: 10 / 19	12012
Test conducted by: Blandan	Lurry			and the desired and the second second second second
Others present:				1122219-09423
	- 1 11 21 6) 17		us: AC TA UC
Well Name: Greater Boundry	tederal 19-34-8	<u> </u>	Type. EK SWD Built	ub. 110
Field: Greater Monument Bu	176 179 T 8	N/8 R/7	E/W County: Duchesne	State: <u>UT</u>
Operator: Newfield Production		21/10		
Last MIT:/		imum Allowa	ble Pressure:	PSIG PSIG
Is this a regularly scheduled Initial test for permit? Test after well rework? Well injecting during test? Pre-test casing/tubing annulu	[]	Yes [No No No If Yes, rate:	bpd
MIT DATA TABLE	Test #1		Test #2	Test #3
TUBING	PRESSURE			
Initial Pressure	300	psig	psig	psig
End of test pressure	300	psig	psig	psig
CASING / TUBING	ANNULUS		PRESSURE	
0 minutes	1305	psig	psig	psig
5 minutes	1305	psig	psig	psig
10 minutes	1305	psig	psig	psig
15 minutes	1305	psig	psig	psig
20 minutes	1305	psig	psig	psig
25 minutes	1305	psig	psig	psig
30 minutes	1305	psig	psig	psig
minutes		psig	psig	psig
minutes		psig	psig	psig
RESULT	[Pass	[]Fail	[] Pass []Fail	[] Pass []Fail
Does the annulus pressure b	uild back up aft	er the test?	[] Yes [/] No	

MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness:	

Sundry Number: 31289 API Well Number: 43013326290000 ...ωe MIDNIGHT = -2000--1750--1500-1250 1000 CHART NO. MC M-2500-24HR DISC NO. METER_ TAKEN OFF CHART PUT NO TIME 1.00 PM TIME 12:30 P M DATE DATE/0-19-2012 6 PM LOCATION 14-34-8-17 REMARKS 0001 1250--0091 -0911 5000-NOON L

Sundry Number: 31289 API Well Number: 43013326290000 Page 1 of 3

Daily Activity Report

Format For Sundry GRTR BNDRY II 14-34-8-17 8/1/2012 To 12/30/2012

10/12/2012 Day: 1

Conversion

NC #2 on 10/12/2012 - MIRUSU, RDPU, PT Tbg, LD Rod String, NU BOP, Tagged Fill - 5:30AM To 6:00AM C/Travl; MIRUSU, H/Oiler Pumped 70BW Down Csq, RDPU, US Rod Pmp, LD Polished Rod, Pmped 40 BW Down Tbg, Soft Seat Rod Pmp, 20BW To Fill Tbg, PT Tbg To 3000psi, GOOD TEST, POOH LD Rod String: 1- 1 1/2"x22' Polished Rod, 100- 3/4" Guided, 85- 3/4" Plain, 41- Guided, 6- 1 1/2" Wt Bars, LD John Crane 2.5"x 1.25"x 17' RHAC Rod Pmp (No Signs Of Scale), XO For Tbg, ND WH, US TA, NU Weatherford BOP, RU WorkFloor, PU 8-Jts, Tagged Bottom @ 6042 ', LD 8- Jts¿SWIFWE¿6:00PM To 6:30PM C/ Travl - 5:30AM To 6:00AM C/ Travl; MIRUSU, H/ Oiler Pumped 70BW Down Csq, RDPU, US Rod Pmp, LD Polished Rod, Pmped 40 BW Down Tbg, Soft Seat Rod Pmp, 20BW To Fill Tbg, PT Tbg To 3000psi, GOOD TEST, POOH LD Rod String: 1- 1 1/2"x22' Polished Rod, 100- 3/4" Guided, 85- 3/4" Plain, 41- Guided, 6- 1 1/2" Wt Bars, LD John Crane 2.5"x 1.25"x 17' RHAC Rod Pmp(No Signs Of Scale), XO For Tbg, ND WH, US TA, NU Weatherford BOP, RU WorkFloor, PU 8- Jts, Tagged Bottom @ 6042 ', LD 8- Jts¿SWIFWE¿6:00PM To 6:30PM C/ Travl - 5:30AM To 6:00AM C/ Travl; MIRUSU, H/ Oiler Pumped 70BW Down Csg, RDPU, US Rod Pmp, LD Polished Rod, Pmped 40 BW Down Tbg, Soft Seat Rod Pmp, 20BW To Fill Tbg, PT Tbg To 3000psi, GOOD TEST, POOH LD Rod String: 1- 1 1/2"x22' Polished Rod, 100- 3/4" Guided, 85- 3/4" Plain, 41-Guided, 6- 1 1/2" Wt Bars, LD John Crane 2.5"x 1.25"x 17' RHAC Rod Pmp(No Signs Of Scale), XO For Tbg, ND WH, US TA, NU Weatherford BOP, RU WorkFloor, PU 8- Jts, Tagged Bottom @ 6042 ', LD 8- Jts¿SWIFWE¿6:00PM To 6:30PM C/ Travl - 5:30AM To 6:00AM C/ Travl; MIRUSU, H/ Oiler Pumped 70BW Down Csg, RDPU, US Rod Pmp, LD Polished Rod, Pmped 40 BW Down Tbg, Soft Seat Rod Pmp, 20BW To Fill Tbg, PT Tbg To 3000psi, GOOD TEST, POOH LD Rod String: 1- 1 1/2"x22' Polished Rod, 100- 3/4" Guided, 85- 3/4" Plain, 41-Guided, 6- 1 1/2" Wt Bars, LD John Crane 2.5"x 1.25"x 17' RHAC Rod Pmp(No Signs Of Scale), XO For Tbg, ND WH, US TA, NU Weatherford BOP, RU WorkFloor, PU 8- Jts, Tagged Bottom @ 6042 ', LD 8- Jts¿SWIFWE¿6:00PM To 6:30PM C/ Travl Finalized

Daily Cost: \$0

Cumulative Cost: \$8,892

10/15/2012 Day: 2

Conversion

NC #2 on 10/15/2012 - POOH W/ Tbg Breaking Collars, LD Remaining Tbg, MU & RIH W/ XN Arrow Set PKR, - 5:30AM To 6:00AM C/ Travl; OWU @ 6:00AM, H/ Oiler Pmped 40 BW Down Tbg, POOH W/ 135 Jts Breaking & Inspecting Collars, Applied Liquid O- Ring To Pins, H/ Oiler Pmped 30 BW Down Tbg, LD- 53 Jts On Trailer, MU & RIH W/ Weatherford XN Arrow Set PKR, TIH W/ 100 Jts Appliing Liquid O- Ring, SWIFN...7:00PM To 7:30PM C/ Travl - 5:30AM To 6:00AM C/ Travl; OWU @ 6:00AM, H/ Oiler Pmped 40 BW Down Tbg, POOH W/ 135 Jts Breaking & Inspecting Collars, Applied Liquid O- Ring To Pins, H/ Oiler Pmped 30 BW Down Tbg, LD- 53 Jts On Trailer, MU & RIH W/ Weatherford XN Arrow Set PKR, TIH W/ 100 Jts Appliing Liquid O- Ring, SWIFN...7:00PM To 7:30PM C/ Travl - 5:30AM To 6:00AM C/ Travl; OWU @ 6:00AM, H/ Oiler Pmped 40 BW Down Tbg, POOH W/ 135 Jts Breaking & Inspecting Collars, Applied Liquid O- Ring To Pins, H/ Oiler Pmped 30 BW Down Tbg, LD- 53 Jts On Trailer, MU & RIH W/ Weatherford XN Arrow Set PKR, TIH W/ 100 Jts Appliing Liquid O- Ring, SWIFN...7:00PM To 7:30PM C/ Travl - 5:30AM To 6:00AM C/ Travl; OWU @ 6:00AM, H/ Oiler Pmped 40 BW Down Tbg, POOH W/ 135 Jts Breaking & Inspecting Collars, Applied Liquid O-Ring To Pins, H/ Oiler Pmped 30 BW Down Tbg, LD- 53 Jts On Trailer, MU & RIH W/ Weatherford XN Arrow Set PKR, TIH W/ 100 Jts Appliing Liquid O- Ring, SWIFN...7:00PM To 7:30PM C/ Travl Finalized

Sundry Number: 31289 API Well Number: 43013326290000

Summary Rig Activity Page 2 of 3

Daily Cost: \$0

Cumulative Cost: \$27,588

10/16/2012 Day: 3

Conversion

NC #2 on 10/16/2012 - TIH W/ PKR, PT TBG, ND BOP, NU INJECTION TREE, PT CSG, RDSU -5:30AM To 6:00AM C/ Trayl: OWU @ 6:00AM, TIH W/ 36 Jts, H/ Oiler Pmped 10BW Pad, Seated Stnd Valv, 20BW To Fill Tbg, PT Tbg To 3000psi, 300psi Loss In 30 Min, Bmp Pressure Back To 3000psi, 300psi Loss In 30 Min, Retreived Stnd Valv, Reseated NEW Stnd Valv W/ Sandline, PT Tbg To 3000psi, 100psi Loss In 30 Min, Bmp Pressure Back To 3000psi, No Pressure Loss In 60 Min, GOOD TEST, Retreived Stnd Valv, RD Workfloor, ND BOP, MU 3K Injection Tree, H/ Oiler Pumped 60BW Of Johnson Wtr W/ PKR Fluids Down Csg, Set XN Arrow Set PKR CE @ 4224', H/ Oiler Filled Csg W/ 20BW, PT Csg To 1600psi For 60 Min, GOOD TEST, XO For Rods, RDSU...6:00PM To 6:30PM C/ Travl....FINAL REPORT!!! READY FOR MIT!!! - 5:30AM To 6:00AM C/ Travl; OWU @ 6:00AM, TIH W/ 36 Jts, H/ Oiler Pmped 10BW Pad, Seated Stnd Valv, 20BW To Fill Tbg, PT Tbg To 3000psi, 300psi Loss In 30 Min, Bmp Pressure Back To 3000psi, 300psi Loss In 30 Min, Retreived Stnd Valv, Reseated NEW Stnd Valv W/ Sandline, PT Tbg To 3000psi, 100psi Loss In 30 Min, Bmp Pressure Back To 3000psi, No Pressure Loss In 60 Min, GOOD TEST, Retreived Stnd Valv, RD Workfloor, ND BOP, MU 3K Injection Tree, H/ Oiler Pumped 60BW Of Johnson Wtr W/ PKR Fluids Down Csg, Set XN Arrow Set PKR CE @ 4224', H/ Oiler Filled Csg W/ 20BW, PT Csg To 1600psi For 60 Min, GOOD TEST, XO For Rods, RDSU...6:00PM To 6:30PM C/ Travl....FINAL REPORT!!! READY FOR MIT!!! - 5:30AM To 6:00AM C/ Travl; OWU @ 6:00AM, TIH W/ 36 Jts, H/ Oiler Pmped 10BW Pad, Seated Stnd Valv, 20BW To Fill Tbg, PT Tbg To 3000psi, 300psi Loss In 30 Min, Bmp Pressure Back To 3000psi, 300psi Loss In 30 Min, Retreived Stnd Valv, Reseated NEW Stnd Valv W/ Sandline, PT Tbg To 3000psi, 100psi Loss In 30 Min, Bmp Pressure Back To 3000psi, No Pressure Loss In 60 Min, GOOD TEST, Retreived Stnd Valv, RD Workfloor, ND BOP, MU 3K Injection Tree, H/ Oiler Pumped 60BW Of Johnson Wtr W/ PKR Fluids Down Csg, Set XN Arrow Set PKR CE @ 4224', H/ Oiler Filled Csg W/ 20BW, PT Csg To 1600psi For 60 Min, GOOD TEST, XO For Rods, RDSU...6:00PM To 6:30PM C/ Travl....FINAL REPORT!!! READY FOR MIT!!! - 5:30AM To 6:00AM C/ Travl; OWU @ 6:00AM, TIH W/ 36 Jts, H/ Oiler Pmped 10BW Pad, Seated Stnd Valv, 20BW To Fill Tbg, PT Tbg To 3000psi, 300psi Loss In 30 Min, Bmp Pressure Back To 3000psi, 300psi Loss In 30 Min, Retreived Stnd Valv, Reseated NEW Stnd Valv W/ Sandline, PT Tbg To 3000psi, 100psi Loss In 30 Min, Bmp Pressure Back To 3000psi, No Pressure Loss In 60 Min, GOOD TEST, Retreived Stnd Valv, RD Workfloor, ND BOP, MU 3K Injection Tree, H/ Oiler Pumped 60BW Of Johnson Wtr W/ PKR Fluids Down Csg, Set XN Arrow Set PKR CE @ 4224', H/ Oiler Filled Csg W/ 20BW, PT Csg To 1600psi For 60 Min, GOOD TEST, XO For Rods, RDSU...6:00PM To 6:30PM C/ Travl....FINAL REPORT!!! READY FOR MIT!!! **Finalized**

Daily Cost: \$0

Cumulative Cost: \$35,395

10/22/2012 Day: 4

Conversion

Rigless on 10/22/2012 - Conduct initial MIT - On 10/18/2012 Jason Deardorff with the EPA was contacted concerning the initial MIT on the above listed well. On 10/19/2012 the casing was pressured up to 1305 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 300 psig during the test. There was not an EPA representative available to witness the test. EPA# UT22219-09423 - On 10/18/2012 Jason Deardorff with the EPA was contacted concerning the initial MIT on the above listed well. On 10/19/2012 the casing was pressured up to 1305 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 300 psig during the test. There was not an EPA representative available to witness the test. EPA# UT22219-09423 - On 10/18/2012 Jason Deardorff with the EPA was contacted concerning the

Sundry Number: 31289 API Well Number: 43013326290000

Page 3 of 3 Summary Rig Activity

initial MIT on the above listed well. On 10/19/2012 the casing was pressured up to 1305 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 300 psig during the test. There was not an EPA representative available to witness the test. EPA# UT22219-09423 - On 10/18/2012 Jason Deardorff with the EPA was contacted concerning the initial MIT on the above listed well. On 10/19/2012 the casing was pressured up to 1305 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 300 psig during the test. There was not an EPA representative available to witness the test. EPA# UT22219-09423 Finalized

Daily Cost: \$0

Cumulative Cost: \$114,229

Pertinent Files: Go to File List

Sundry Number: 32107 API Well Number: 43013326290000

	STATE OF UTAH				FORM 9		
DEPARTMENT OF NATURAL RESOURCES			5.LEASE DESIGNATION AND SERIAL NUMBER:				
DIVISION OF OIL, GAS, AND MINING				UTU-79017			
SUNDRY NOTICES AND REPORTS ON WELLS				6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
	pposals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.			7.UNIT or GMBU (0	CA AGREEMENT NAME: GRRV)		
1. TYPE OF WELL Water Injection Well					8. WELL NAME and NUMBER: BOUNDARY FED 14-34-8-17		
2. NAME OF OPERATOR: NEWFIELD PRODUCTION CO	OMPANY			9. API NUMBER: 43013326290000			
3. ADDRESS OF OPERATOR: Rt 3 Box 3630 , Myton, UT	, 84052 435 646-482		DNE NUMBER: tt		and POOL or WILDCAT: ENT BUTTE		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0660 FSL 1979 FWL				COUNTY: DUCHES			
QTR/QTR, SECTION, TOWNSI Qtr/Qtr: SESW Section: 3	HIP, RANGE, MERIDIAN: 34 Township: 08.0S Range: 17.0E Merio	dian: \$	S	STATE: UTAH			
11. CHEC	K APPROPRIATE BOXES TO INDICA	TE N.	ATURE OF NOTICE, REPOR	RT, OR 01	THER DATA		
TYPE OF SUBMISSION			TYPE OF ACTION				
	ACIDIZE		ALTER CASING		CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING		CHANGE WELL NAME		
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	1	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN		FRACTURE TREAT		NEW CONSTRUCTION		
11/13/2012	OPERATOR CHANGE		PLUG AND ABANDON		PLUG BACK		
SPUD REPORT	PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE		RECOMPLETE DIFFERENT FORMATION		
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL		TEMPORARY ABANDON		
_	TUBING REPAIR		VENT OR FLARE		WATER DISPOSAL		
DRILLING REPORT Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION		APD EXTENSION		
	WILDCAT WELL DETERMINATION	1	OTHER	OTHER	R: Put on Injection		
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show	all ne	rtinent details including dates, d				
l .	erence well was put on inject	-	_				
	11/13/2012.				Accepted by the Utah Division of		
				Oil	, Gas and Mining		
					R RECORD ONLY		
				N	ovember 19, 2012		
NAME (DI EASE DRINT)	DHONE NUME)ED	TITLE				
NAME (PLEASE PRINT) Lucy Chavez-Naupoto	PHONE NUME 435 646-4874	ÞEK	Water Services Technician				
SIGNATURE N/A			DATE 11/15/2012				



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

NOV 05 2012

RECEIVED

NOV 1 9 2012

DIV. OF OIL, GAS & MINING

Ref: 8P-W-UIC

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. Reed Durfey
District Manager
Newfield Production Company
Route 3 – Box 3630
Myton, Utah

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

RE: Underground Injection Control (UIC)
Authorization to Commence Injection
EPA UIC Permit UT22219-09423

Well: Greater Boundary Federal 14-34-8-17

SESW Sec. 34-T8S-R17E Duchesne County, Utah API No.: 43-013-32629

Dear Mr. Durfey:

The U.S. Environmental Protection Agency Region 8 has received Newfield Production Company's (Newfield) October 26, 2012, letter with enclosures. The enclosed Part I (internal) Mechanical Integrity test, Well Rework Record (EPA Form 7520-12), schematic diagram and calculated pore pressure were reviewed and approved by the EPA, satisfactorily completing all Prior to Commencing Injection Requirements for UIC Permit UT22219-09423.

As of the date of this letter, Newfield is authorized to commence injection into the Greater Boundary Federal 14-34-8-17 well at a Maximum Allowable Injection Pressure (MAIP) of 1,165 psig. You may apply for a higher MAIP at a later date. Your application should be accompanied by the interpreted results of a step rate test that measures the fracture parting pressure and calculates the fracture gradient at this depth and location. Newfield must receive prior authorization from the Director to inject at pressures greater than the permitted MAIP during any test.

As of this approval, responsibility for permit compliance and enforcement is transferred to the EPA's UIC Technical Enforcement Program. Therefore, please direct all monitoring and compliance correspondence to Sarah Roberts at the following address, referencing the well name and UIC Permit number on all correspondence:

Ms. Sarah Roberts U.S. EPA Region 8: 8ENF-UFO 1595 Wynkoop Street Denver, Colorado 80202-1129

Or, you may reach Ms. Roberts by telephone at (303) 312-6211 or (800) 227-8927, extension 312-6211.

Please remember that it is your responsibility to be aware of and to comply with all conditions of injection well Permit UT22219-09423.

If you have questions regarding the above action, please call Emmet Schmitz at (303) 312-6174 or (800) 227-8917, extension 312-6174.

Sincerely,

fa

Howard M. Cantor, for Assistant Regional Administrator de U
Office of Partnerships and Regulatory Assistance

FOR RECORD ONLY

cc: Uintah & Ouray Business Committee:

Irene Cuch, Chairwoman
Richard Jenks, Jr., Councilman
Frances Poowegup, Councilwoman
Ronald Wopsock, Vice-Chairman
Phillip Chimburas, Councilman
Stewart Pike, Councilman

Johanna Blackhair BIA - Uintah & Ouray Indian Agency

Mike Natchees Environmental Coordinator Ute Indian Tribe

Manual Myore Director of Energy & Minerals Dept. Ute Indian Tribe

Brad Hill
Acting Associate Director
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office BLM - Vernal Office Eric Sundberg, Regulatory Analyst Newfield Production Company

THE STANS OF THE S

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8 1595 WYNKOOP STREET DENVER, CO 80202-1129 http://www.epa.gov/region8

517 2 1 2012

Ref: 8P-W-UIC

CERTIFIED MAIL RETURN RECEIPT REQUESTED

COCT 111 C2012

Eric Sundberg Newfield Production Company 1001 Seventeenth Street, Suite 2000 Denver, CO 80202

DIVOPPOIL GAS & MINING

Accepted by the Utah Division of Oil, Gas and Mining Re: FINAL Permit

EPA UIC Permit UT22219-09423

Well: Greater Boundary Federal 14-34-8-17

SESW Sec. 34-T8S-R17E Duchesne County, UT API No.: 4301332629

FOR RECORD ONLY

Dear Mr. Sundberg:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Program Permit for the proposed Greater Boundary Federal 14-34-8-17 injection well. A Statement of Basis that discusses the conditions and requirements of this Environmental Protection Agency (EPA) UIC Permit, is also included.

The public comment period for this permit ended on _______. No comments on the draft permit were received during the public notice period; therefore the effective date for this EPA UIC Permit is the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect as of the Effective Date of this Permit.

Please note that under the terms and conditions of this final permit you are authorized only to construct the proposed injection well. Prior to commencing injection, you first must fulfill all "Prior to Commencing Injection" requirements of the final permit, Part II Section C.1, and obtain written Authorization to Inject from EPA. It is your responsibility to be familiar with and to comply with all provisions of your final permit. The EPA forms referenced in the permit are available at http://www.epa.gov/safewater/uic/reportingforms.html. Guidance documents for Cement Bond Logging, Radioactive Tracer Testing, Step Rate Testing, Mechanical Integrity Demonstration, Procedure in the Event of a Mechanical Integrity Loss, and other UIC guidances, are available at http://www.epa.gov/region8/water/uic/ deep_injection.html. Upon request, hard copies of the EPA forms and guidances can be provided.



This EPA UIC permit is issued for the operating life of the well unless terminated (Part III, Section B). The EPA may review this permit at least every five (5) years to determine whether any action is warranted pursuant to 40 CFR § 144.36(a).

If you have any questions on the enclosed final permit or Statement of Basis, please call Emmett Schmitz of my staff at (303) 312-6174, or toll-free at (800) 227-8917, ext. 312-6174.

Sincerely,

Howard M. Cantor, for

Assistant Regional Administrator

Office of Partnerships and Regulatory Assistance

enclosure:

Final UIC Permit

Statement of Basis

cc:

Letter Only:

Uintah & Ouray Business Committee:

Irene Cuch, Chairman

Ronald Wopsock, Vice-Chairman Frances Poowegup, Councilwoman Phillip Chimburas, Councikman

Stewart Pike, Councilman

Richards Jenks, Jr., Councilman

Johnna Blackhair

BIA - Uintah & Ouray Indian Agency

cc: All Enclosures:

Reed Durfey District Manager

Newfield Production Company

Myton, Utah

Mike Natchees Environmental Coordinator Ute Indian Tribe

Manual Myore Director of Energy & Minerals Dept.

Brad Hill Acting Associate Director Utah Division of Oil, Gas, and Mining

BLM Fluid Minerals Engineering Office Vernal, Utah Office

⊕EPA

UNDERGROUND INJECTION CONTROL PROGRAM PERMIT

PREPARED: September 2012

Permit No. UT22219-09423

Class II Enhanced Oil Recovery Injection Well

Greater Boundary Federal 14-34-8-17 Duchesne County, UT

Issued To

Newfield Production Co.

1001 Seventeenth Street, Suite 2000 Denver, CO 80202*

Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit.

Newfield Production Co. 1001 Seventeenth Street, Suite 2000 Denver, CO 80202

is authorized to construct and to operate the following Class II injection well or wells:

Greater Boundary Federal 14-34-8-17 660' FSL & 1979' FWL, SESW S34, T8S, R17E Duchesne County, UT

EPA regulates the injection of fluids into injection wells so that injection does not endanger underground sources of drinking water (USDWs). EPA UIC Permit conditions are based on authorities set forth at 40 CFR Parts 144 and 146, and address potential impacts to USDWs.

Under 40 CFR Part 144, Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General permit conditions for which the content is mandatory and not subject to site-specific differences are not discussed in this document. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize injury to persons or property or invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. (40 CFR §144.35) An EPA UIC Permit may be issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR §144.39, 144.40 and 144.41, and may be reviewed at least once every five (5) years to determine if action is required under 40 CFR §144.36(a).

This Permit is issued for the life of the well(s) unless modified, revoked and reissued, or terminated under 40 CFR §144.39 or 144.40. This EPA Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for a UIC Program is delegated to an Indian Tribe or State. Upon the effective date of delegation, reports, notifications, questions and other correspondence should be directed to the Indian Tribe or State Director.

Issue Date: SEP 2 1 2012 Effective Date SEP 2 1 2012

Howard M. Cantor, for Assistant Regional Administrator*

Office of Partnerships and Regulatory Assistance

*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

PART II. SPECIFIC PERMIT CONDITIONS

Section A. WELL CONSTRUCTION REQUIREMENTS

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

1. Casing and Cement.

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

2. Injection Tubing and Packer.

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

3. Sampling and Monitoring Devices.

The Permittee shall install and maintain in good operating condition:

- (a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and
- (b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:
 - (i) on the injection tubing; and
 - (ii) on the tubing-casing annulus (TCA); and
- (c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure (MAIP) specified in APPENDIX C is reached at the wellhead; and
- (d) a non-resettable cumulative volume recorder attached to the injection line.

4. Well Logging and Testing

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

5. Postponement of Construction or Conversion

The Permittee shall complete well construction within one year of the Effective Date of the Permit, or in the case of an Area Permit within one year of Authorization of the additional well. Authorization to construct and operate shall expire if the well has not been constructed within one year of the Effective Date of the Permit or Authorization and the Permit may be terminated under 40 CFR 144.40, unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate may be reissued.

6. Workovers and Alterations

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to an injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

Section B. MECHANICAL INTEGRITY

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

- (a) There is no significant leak in the casing, tubing, or packer (Part I); and
- (b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

1. Demonstration of Mechanical Integrity (MI).

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

2. Mechanical Integrity Test Methods and Criteria

EPA-approved methods shall be used to demonstrate mechanical integrity. Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are available from EPA and will be provided upon request.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

3. Notification Prior to Testing.

The Permittee shall notify the Director at least seven calendar days prior to any mechanical integrity test unless the mechanical integrity test is conducted after a well construction, well conversion, or a well rework, in which case any prior notice is sufficient. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

4. Loss of Mechanical Integrity.

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit) and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

Section C. WELL OPERATION

INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.

Injection is approved under the following conditions:

1. Requirements Prior to Commencing Injection.

Well injection, including for new wells authorized by an Area Permit under 40 CFR 144.33 (c), may commence only after all well construction and pre-injection requirements herein have been met and approved. The Permittee may not commence injection until construction is complete, and

- (a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-10 or 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and
 - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or
 - (ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

2. Injection Interval.

Injection is permitted only within the approved injection interval, listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

3. Injection Pressure Limitation

- (a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into a USDW.
- (b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permitee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

4. Injection Volume Limitation.

Injection volume is limited to the total volume specified in APPENDIX C.

5. Injection Fluid Limitation.

Injected fluids are limited to those identified in 40 CFR 144.6(b)(2) as fluids used for enhanced recovery of oil or natural gas, including those which are brought to the surface in connection with conventional oil or natural gas production that may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved for injection. This well is NOT approved for commercial brine injection, industrial waste fluid disposal or injection of hazardous waste as defined by CFR 40 Part 261. The Permittee shall provide a listing of the sources of injected fluids in accordance with the reporting requirements in Part II Section D Paragraph 4 and APPENDIX D of this Permit.

6. Tubing-Casing Annulus (TCA)

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS

1. Monitoring Parameters, Frequency, Records and Reports.

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

- (a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;
- (b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;
- (c) the analytical techniques or methods used for analysis.

2. Monitoring Methods.

(a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.

- (b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.
- (c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.
- (d) Pressures are to be measured in pounds per square inch (psi).
- (e) Fluid volumes are to be measured in standard oil field barrels (bbl).
- (f) Fluid rates are to be measured in barrels per day (bbl/day).

3. Records Retention.

- (a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.
- (b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.

4. Annual Reports.

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

Section E. PLUGGING AND ABANDONMENT

1. Notification of Well Abandonment, Conversion or Closure.

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning an injection well, 2) converting to a non-injection well, and 3) in the case of an Area Permit, before closure of the project.

2. Well Plugging Requirements

Prior to abandonment, the injection well shall be plugged with cement in a manner which isolates the injection zone and prevents the movement of fluids into or between underground sources of drinking water, and in accordance with 40 CFR 146.10 and other applicable Federal, State or local law or regulations. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director.

3. Approved Plugging and Abandonment Plan.

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

4. Forty Five (45) Day Notice of Plugging and Abandonment.

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning a well and provide notice of any anticipated change to the approved plugging and abanonment plan.

5. Plugging and Abandonment Report.

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

- (a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or
- (b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

6. Inactive Wells.

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:

- (a) Provides written notice to the Director;
- (b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and
- (c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

PART III. CONDITIONS APPLICABLE TO ALL PERMITS

Section A. EFFECT OF PERMIT

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of any other Federal, State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

Section B. CHANGES TO PERMIT CONDITIONS

1. Modification, Reissuance, or Termination.

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

2. Conversions.

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

3. Transfer of Permit.

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

4. Permittee Change of Address.

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

5. Construction Changes, Workovers, Logging and Testing Data

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging, or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this Permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

Section C. SEVERABILITY

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

Section D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

Section E. GENERAL PERMIT REQUIREMENTS

1. Duty to Comply.

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.

2. Duty to Reapply.

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

3. Need to Halt or Reduce Activity Not a Defense.

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

4. Duty to Mitigate.

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

5. Proper Operation and Maintenance.

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

6. Permit Actions.

This Permit may be modified, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

7. Property Rights.

This Permit does not convey any property rights of any sort, or any exclusive privilege.

8. Duty to Provide Information.

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

9. Inspection and Entry.

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

 (a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit:
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

10. Signatory Requirements.

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

11. Reporting Requirements.

- (a) Planned changes. The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.
- (b) Anticipated noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) Monitoring Reports. Monitoring results shall be reported at the intervals specified in this Permit.
- (d) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.
- (e) Twenty-four hour reporting. The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:
 - (i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or
 - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- (f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website http://www.nrc.uscg.mil/index.htm.
- (g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.
- (h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

Section F. FINANCIAL RESPONSIBILITY

1. Method of Providing Financial Responsibility.

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

2. Insolvency.

In the event of:

- (a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or
- (b) suspension or revocation of the authority of the trustee institution to act as trustee; or

(c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

Permit

Permit UT22219-09423

APPENDIX A

WELL CONSTRUCTION REQUIREMENTS

See diagram.

The Greater Boundary Federal 14-34-8-17was drilled to a total depth of 6,130 feet in the Wasatch Formation.

Surface casing (8-5/8 inch) was set at a depth of 313 feet (KB) in a 12-1/4 inch hole using 160 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 6,121 feet (KB) in a 7-7/8 inch hole with 850 sacks of cement. Well construction is considered adequate to protect all USDWs. Top of cement by CBL at 30 feet.

Current injection perforations are in the Garden Gulch and Douglas Creek Members of the Green River Formation. Additional perforations may be added at a later time between the depths of 4,085 feet and the top of the Wasatch Formation (6,118 feet) provided that the operator first notifies the Director and later submits an updated Well Rework Record (EPA Form 7520-12) and schematic diagram.

The packer will be set no higher than 100 feet above the top perforation.

Grt. Bndry.Federal 14-34-8-17

Spud Date: 4-22-05 Initial Production: BOPD. Put on Production: 9-16-05 Proposed Injection MCFD. BWPD GL: 5070' KB: 5082' Wellbore Diagram SURFACE CASING FRAC JOB CSG SIZE: 8-5/8" 9-12-05 5793-5802' Frac CP4, sands as follows: Cement top @ 30' GRADE: J-55 23996# 20/40 sand in 310 bbls Lightning 17 frac fluid. Treated @ avg press of 1606 psi w/avg rate of 24.8 BPM. ISIP 1850 psi. Calc WEIGHT: 24# flush: 5791 gal. Actual flush: 5838 gal. LENGTH: 7 jts. (301.49') DEPTH LANDED: 313,34° KB 9-12-05 5614-5668 Frac CP1, CP2 sands as follows: Casing Shoe @ 313' 109397# 20/40 sand in 788 bbls Lightning 17 HOLE SIZE:12-1/4" frac fluid. Treated @ avg press of 997 psi CEMENT DATA: 160 sxs Class "G" cmt, est 7 bbis cmt to surf. w/avg rate of 24.7 BPM. ISIP 1600 psi. Calc flush: 5612 gal. Actual flush: 5628 gal. 9-12-05 5097-5105 Frac B2 sands as follows: 40176# 20/40 sand in 339 bbls Lightning 17 frac fluid. Treated @ avg press of 2153 psi w/avg rate of 25.8 BPM. ISIP 3600 psi. Calc flush: 5095 gal. Actual flush: 3444 gal. Frac C sands as follows: 23937# 20/40 sand in 288 bbls Lightning 17 9-13-05 4945-4952 PRODUCTION CASING frac fluid. Treated @ avg press of 2410 psi CSG SIZE: 5-1/2" w/avg rate of 27 BPM. ISIP 2000 psi. GRADE: J-55 Calc flush: 4943 gal. Actual flush: 4956 gal. 4380-4394 Frac PB7 sands as follows: WEIGHT: 15.5# 54421# 20/40 sand in 441 bbls Lightning 17 frac fluid. Treated @ avg press of 1846 psi w/avg rate of 16.5 BPM. ISIP 2550 psi. Calc flush: 4378 gal. Actual flush: 4410 gal LENGTH: 139 jts. (6108.18') DEPTH LANDED: 6121,43' KB 9-13-05 4272-4285 Frac GB4 sands as follows: 95213# 20/40 sand in 652 bbls Lightning 17 CEMENT DATA: 375 sxs Prem. Lite II mixed & 475 sxs 50/50 POZ. frac fluid, Treated @ avg press of 1920 psi w/avg rate of 28 BPM, ISIP 2250 psi. Calc flush: 4270 gal. Actual flush: 4200 gal CEMENT TOP AT: 30' 8/4/2010 Tubing leak. Updated rod and tubing detail. 03/06/12 Parted Rod. Updated rad & tubing detail TUBING SIZE/GRADE/WT.: 2-7/8" / J-55 / 6.5# NO, OF JOINTS: 185 its (5757.2') TUBING ANCHOR: 5767.2' KB NO. OF JOINTS: 1 jts (31.5') SEATING NIPPLE: 2-7/8" (1.10') SN LANDED AT: 5801.5' KB NO. OF JOINTS: 2 jts (62.2') TOTAL STRING LENGTH: EOT @ 5865' KB Packer @ 4222' 4272-4285 4380-4386 4390-4394 PERFORATION RECORD 9-07-05 5793-5802' 4 JSPF 9-12-05 5654-5668' 56 holes 9-12-05 5614-5632' 4 JSPF 72 holes 9-12-05 5097-51051 4 ISPF 32 holes 4945-49521 9-13-05 4 JSPF 28 holes 4945-4952 9-13-05 4390-4394' 16 holes 4 JSPF 5097-5105 4380-4386' 24 holes 9-13-05 4272-4285' 4 JSPF 52 holes 5614-5632 5654~56681 5793-58021 NEWFIELD PBTD @ 6076' SHOE @ 6121' Gr. Bndry. Federal 14-34-8-17 TD @ 6130' 660' FSL & 1979' FWL SE/SW Section 34-T8S-R17E Duchesne Co, Utah

API #43-013-32629; Lease #UTU-79017

APPENDIX B

LOGGING AND TESTING REQUIREMENTS

Logs.

Logs will be conducted according to current UIC guidance. It is the responsibility of the Permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

NO LOGGING REQUIREMENTS

Tests.

Tests will be conducted according to current UIC guidance. It is the responsibility of the Permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

TYPE OF TEST	DATE DUE
Pore Pressure	Prior to receiving authorization to inject
Standard Annulus Pressure	Prior to receiving authorization to inject and at least once every five (5) years after the last successful demonstration of Part I Mechanical Integrity.

APPENDIX C

OPERATING REQUIREMENTS

MAXIMUM ALLOWABLE INJECTION PRESSURE:

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

	MAXIMUM ALLOWED INJECTION PRESSURE (psi			
WELL NAME	ZONE 1 (Upper)			
Greater Boundary Federal 14-34-8-17	1,165			

INJECTION INTERVAL(S):

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

	-8-17		
	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT
FORMATION NAME	TOP	BOTTOM	(psi/ft)

ANNULUS PRESSURE:

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. of this permit.

MAXIMUM INJECTION VOLUME:

There is no limitation on the number of barrels per day (bbls/day) of water that shall be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Appendix C.

APPENDIX D

MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

	Injection pressure (psig)
OBSERVE AND RECORD	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
REGURD	Fluid volume injected since the well began injecting (bbls)

	ANNUALLY
	Injected fluid total dissolved solids (mg/l)
ANALYZE	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH

	ANNUALLY
REPORT	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and minimum annulus pressure(s) (psig)
	Each month's injected volume (bbl)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

In addition to these items, additional Logging and Testing results may be required periodically. For a list of those items and their due dates, please refer to APPENDIX B - LOGGING AND TESTING REQUIREMENTS.

APPENDIX E

PLUGGING AND ABANDONMENT REQUIREMENTS

Plugging and Abandonment: The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluids into or between Underground Sources of Drinking Water (USDW). Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements, with additives such as accelerators and retarders that control or enhance cement properties, may be used for plugs; however, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. A minimum 50 ft. surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

- (1) ☐ Isolate the injection zone: Remove down hole apparatus and perform clean out; displace well fluid with plugging gel. Set a cast iron bridge plug (CIBP) within the innermost casing no more than 50 ft. above the top perforation with a minimum of 20 ft. cement plug on top of the CIBP.
- (2) Isolate the Trona-Bird's Nest and Mahogany Oil Shale: Perforate and squeeze cement up the backside of the outermost casing from at least 55 ft. above the top of the Trona-Bird's Nest to at least 55 ft. below the base of Mahogany Oil Shale, unless there is existing cement across this interval.
- (3) ☐ Isolate the Uinta Formation from the Green River Formation: Perforate and squeeze a minimum of 110 ft. cement up the backside of the outermost casing to isolate the contact between the Uinta Formation and the Green River Formation, unless there is existing cement across this interval. Set a minimum 110 ft. cement plug in the innermost casing centered on the contact between the Green River and Uinta Formations.
- (4) ☐ Isolate Surface Fluid Migration Paths:
- a. If the depth of the lowermost USDW is above the base of surface casing, perforate the outermost casing string 50 ft. below the base of surface casing and circulate cement to the surface, unless there is existing cement across this interval; OR
- b. If the depth of the lowermost USDW is below the base of surface casing, perforate the outermost casing string 50 ft. below the base of the lowermost USDW and circulate cement to surface; AND
- c. ☐ Set a cement plug inside the innermost casing string from 50 ft. below the base of the surface casing to surface.

Permit UT'22219-09423 E-1

APPENDIX F

CORRECTIVE ACTION REQUIREMENTS

No corrective action is deemed necessary for this project.

STATEMENT OF BASIS

NEWFIELD PRODUCTION CO. GREATER BOUNDARY FEDERAL 14-34-8-17 DUCHESNE COUNTY, UT

EPA PERMIT NO. UT22219-09423

CONTACT: Emmett Schmitz

U. S. Environmental Protection Agency Region 8

Mailcode: 8P-W-UIC 1595 Wynkoop Street

Denver, Colorado 80202-1129

Telephone: 1-800-227-8917 ext. 312-6174

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

EPA UIC permits regulate the injection of fluids into underground injection wells so that the injection does not endanger underground sources of drinking water. EPA UIC permit conditions are based upon the authorities set forth in regulatory provisions at 40 CFR Parts 144 and 146, and address potential impacts to underground sources of drinking water. Under 40 CFR 144.35 Issuance of this permit does not convey any property rights of any sort or any exclusive privilege, nor authorize injury to persons or property of invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which the content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the construction and operation of injection wells so that the injection does not endanger underground sources of drinking water, governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

PART I. General Information and Description of Facility

Newfield Production Co. 1001 Seventeenth Street, Suite 2000 Denver, CO 80202

on

November 14, 2011

submitted an application for an Underground Injection Control (UIC) Program Permit or Permit Modification for the following injection well or wells:

Greater Boundary Federal 14-34-8-17 660' FSL & 1979' FWL, SESW S34, T8S, R17E Duchesne County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The application, including the required information and data necessary to issue or modify a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed and determined by EPA to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

The Greater Boundary Federal 14-34-8-17 well is currently an active Garden Gulch-Douglas Creek Members of the Green River Formation oil well. The applicant intends to convert this oil well to a Class II enhanced recovery injection well.

TABLE 1.1 WELL STATUS / DATE OF OPERATION

NEW WELLS

Well Name

Well Status

Date of Operation

Greater Boundary Federal 14-34-8-17

New

N/A

PART II. Permit Considerations (40 CFR 146.24)

Hydrogeologic Setting

Water wells for domestic supply in this area, when present, generally are completed into the shallow alluvium, the Duchesne River Formation, or the underlying Uinta Formation, and the water generally contains approximately 500 to 1,500 mg/l and higher total dissolved solids.

The Uinta-Animas aquifer in the Uinta Basin is present in water-yielding beds of sandstone, conglomerate, and siltstone of the Duchesne River and Uinta Formations, the Renegade Tongue of the Wasatch Formation, and the Douglas Creek Member of the Green River Formation. The Renegade Tongue of the Wasatch Formation and the Douglas Creek Member of the Green River Formation contain an aquifer along the southern and eastern margins of the basin where the rocks primarily consist of fluvial, massive, irregularly bedded sandstone and siltstone. Water-yielding units in the Uinta-Animas aquifer in the Uinta Basin commonly are separated from each other and from the underlying Mesaverde aquifer by units of low permeability composed of claystone, shale, marlstone, or limestone. In the Uinta Basin, for example, the part of the aquifer in the Duchesne River and Uinta Formations ranges in thickness from 0 feet at the southern margin of the aquifer to as much as 9,000 feet in the north-central part of the aquifer. Ground-water recharge to the Uinta-Animas aguifer generally occurs in the areas of higher altitude along the margins of the basin. Ground water is discharged mainly to streams, springs, and by transpiration from vegetation growing along stream valleys. The rate of ground-water withdrawal is small, and natural discharge is approximately equal to recharge. Recharge occurs near the southern margin of the aquifer, and discharge occurs near the White and Green Rivers (from USGS publication HA 730-C). Water samples from Mesaverde sands in the nearby Natural Buttes Unit yielded highly saline water.

Geologic Setting (TABLE 2.1)

The proposed Class II enhanced oil recovery injection well is located in the Greater Monument Butte Field, T7-9S and R15-19E, which lies near the center of the broad, gently northward dipping south flank of the Uinta Basin. More than 450 million barrels of oil (63 MT) have been produced from sediments of the Uinta Basin. The Uinta Basin is a topographic and structural trough encompassing an area of more than 9,300 square miles (14,900 km) in northeast Utah. The basin is sharply asymmetrical, with a steep north flank bounded by the east-west-trending Uinta Mountains, and a gently dipping south flank. The Uinta Basin was formed in Paleocene to Eocene time, creating a large area of internal drainage which was filled by the ancestral Lake Uinta. The lacustrine, or fresh water lake-formed, sediments deposited in and around Lake Uinta make up the Uintah and Green River Formations. The southern shore of Lake Uinta was very broad and flat, resulting in large cyclic shifts of the location of the shoreline during the many repeated

transgressive and regressive cycles caused by the climatic and tectonic-induced rise and fall of water levels of the lake. Distributary-mouth bars, distributary channels, and near-shore bars are the primary oil producing sandstone reservoirs in the area. (Ref: "Reservoir Characterization of the Lower Green River Formation, Southwest Uinta Basin, Utah Biannual Technical Progress Report, 4/1/99-9/30/99", by C. D. Morgan, Program Manager, November 1999, Contract DE-AC26-98BC15103).

The Duchesne River Formation is absent in this area. Shale and siltstone of the Uintah Formation outcrop and compose the surface rock throughout the area. The lower 600 feet to 800 feet of the Uinta Formation, consisting generally of shale interbedded with occasionally water-bearing sandstone lenses between 5 feet to 20 feet thick, is underlain by the Green River Formation. The Green River Formation is further subdivided into several Member and local marker units. The cyclic nature of Green River deposition in the southern shore area resulted in numerous stacked, intertonguing deltaic and near-shore sand and silt deposits. Red alluvial shale and siltstone deposits that intertongue with the Green River sediments are of the Colton and Wasatch Formations. Under the Wasatch Formation is the Mesaverde Formation, which consists primarily of continental-origin deposits of interbedded shale, sandstone, and coal.

The geologic dip is about 200 feet per mile, and there are no known surface faults in this area. Veins of gilsonite, a natural resinous hydrocarbon occasionally mined as a resource, occurs in the greater Uintah Basin though it is predominantly found on the eastern margin of the basin near the Colorado border. Vertical veins, generally between 2 feet to 6 feet wide but up to 28 feet wide, may extend many miles in length and occasionally extend as deep as 2,000 feet.

TABLE 2.1 GEOLOGIC SETTING

Greater Boundary Federal 14-34-8-17

Formation Name	Top (ft)	Base (ft)	TDS	6 (mg/l)	Lithology
Uinta: Public. 92	0	75	<	10,000	Sand and shale
Uinta	0	1,452	<	10,000	Sand, shale & carbonate
Green River	1,452	6,118			Sand, shale,carbonate,evaporite
Green River: Trona	2,955	2,995		,	Evaporite
Green River: Mahogany Bench	2,995	3,015			Shale
Green River: Garden Gulch Marker	3,785	3,968			Shale, sand, carbonate
Green River: Garden Gulch 1	3,968	4,085.			Shale,sand,carbonate
Green River: Garden Gulch 2	4,085	4,753		20,337	Sand, shale , carbonate
Green River: Douglas Creek	4,753	5,996		20,337	Sand, shale, carbonate
Green River: Basal Carbonate	5,996	6,118			Carbonate
Wasatch	6,118				•

Proposed Injection Zone(s) (TABLE 2.2)

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by a confining zone which is free of known open faults or fractures within the Area of Review.

The approved interval for Class II enhanced recovery injection occurs between the top of the Garden Gulch Member No. 2 (4,085 feet) and the top of the Wasatch Formation at 6,118 feet.

TABLE 2.2 INJECTION ZONES

Greater Boundary Federal 14-34-8-17

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*	
Green River	4,085	6,118	20,337	0.713		N/A	

^{*} C - Currently Exempted

- E Previously Exempted
- P Proposed Exemption
- N/A Not Applicable

Confining Zone(s) (TABLE 2.3)

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

The Green River Formation Confining Zone occurs between the depths of 3,589 feet and 4,085 feet.

TABLE 2.3 CONFINING ZONES

Greater Boundary Federal 14-34-8-17

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Green River	Sand, shale, carbonate	3,589	4,085

Underground Sources of Drinking Water (USDWs) (TABLE 2.4)

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

The State of Utah "Water Wells and Springs", http://NRWRT1.STATE.UT.US, identifies no public water supply wells within the one-quarter (1/4) mile Area-of-Review (AOR) around the Greater Boundary Federal 14-34-8-17.

Technical Publication No. 92: State of Utah, Department of Natural Resources, cites the base of

Underground Sources of Drinking Water (USDW) in the Uinta Formation, approximately 75 feet from the surface.

Absent definitive analyses of water within the Uinta Formation (Surface to top of Green River Formation at 1,452 feet) is considered a potential USDW with total dissolved solids less than 10,000 mg/l.

TABLE 2.4 UNDERGROUND SOURCES OF DRINKING WATER (USDW)

Greater Boundary Federal 14-34-8-17

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)	
Uinta	Sand, shale, carbonates	0	1,452	< 10,000	
Uinta: Public. 92	Sand and shale	0	75	< 10,000	

PART III. Well Construction (40 CFR 146.22)

The Greater Boundary Federal was drilled to a total depth of 6,130 feet in the Wasatch Formation.

Surface casing (8-5/8 inch) was set at a depth of 313 feet (KB) in a 12-1/4 inch hole using 160 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 6,121 feet (KB) in a 7-7/8 inch hole with 850 sacks of cement. Well construction is considered adequate to protect all USDWs. Top of cement by CBL at 30 feet.

Current injection perforations are in the Garden Gulch and Douglas Creek Members of the Green River Formation. Additional perforations may be added at a later time between the depths of 4,085 feet and the top of the Wasatch Formation (6,118 feet) provided that the operator first notifies the Director and later submits an updated Well Rework Record (EPA Form 7520-12) and schematic diagram.

The packer will be set no higher than 100 feet above the top perforation.

TABLE 3.1 WELL CONSTRUCTION REQUIREMENTS

Greater Boundary Federal 14-34-8-17

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Surface	12.25	8.63	0 - 313	0 - 313
Longstring	7.88	5.50	0 - 6,121	30 - 6,130

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be

binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

Casing and Cementing (TABLE 3.1)

The well construction plan was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction details for this "new" injection well is shown in TABLE 3.1.

Remedial cementing may be required if the casing cement is shown to be inadequate by cement bond log or other demonstration of Part II (External) mechanical integrity.

Tubing and Packer

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

Tubing-Casing Annulus (TCA)

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

The tubing/casing annulus must be kept closed at all times so that it can be monitored as required under the Permit.

Monitoring Devices

The permittee will be required to install and maintain wellhead equipment that allows for monitoring pressures and providing access for sampling the injected fluid. Required equipment may include but is not limited to: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) fittings or pressure gauges attached to the injection tubing and the TCA for monitoring the injection and TCA pressure; and 4) a tap on the injection line, isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)

TABLE 4.1 AOR AND CORRECTIVE ACTION

Well Name	Туре	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
Greater Boundary Q-34-8-17	Producer	No	6,276	60	No
Greater Boundary R-34-8-17	Producer	No .	6,242	44	No
Greater Boundary 15-34-8-17	Injector	No	6,076	70	No
Harbourtown Federal 23-34-8-17	Injector	Ņo	5,900	1,140	No

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

Area Of Review

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

Corrective Action Plan

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

PART V. Well Operation Requirements (40 CFR 146.23)

	TABLE 5.1		
INJE	CTION ZONE PRESSU	RES	
Great	er Boundary Federal 14-34	8-17	•
Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Green River	4,272	0.713	1,165

Approved Injection Fluid

The approved injection fluid is limited to Class II injection well fluids pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Injection of non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes, and vacuum truck and drum rinsate from trucks and drums transporting or containing non-exempt waste, is prohibited.

The proposed injectate will be a blend of fluid from Green River Formation oil wells proximate to the Greater Boundary Federal 14-34-8-17 and/or water from the Green River and/or water from the Johnson Water District reservoir.

Injection Pressure Limitation

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP), as measured at the surface, for this Permit.

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

FP = formation fracture pressure (measured at surface)

fg = fracture gradient (from submitted data or tests)

sa = specific gravity (of injected fluid)

d = depth to top of injection zone (or top perforation)

Injection Volume Limitation

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

There will be no restrictions on the cumulative volume of authorized fluid injected into the Green River Formation 4,085 feet to the top of the Wasatch Formation at 6,118 feet.

Mechanical Integrity (40 CFR 146.8)

An injection well has mechanical integrity if:

- 1. there is no significant leak in the casing, tubing, or packer (Part I); and
- 2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependent upon well-specific conditions as explained below.

Well construction and site-specific conditions dictate the following requirements for Mechanical Integrity (MI) demonstrations:

PART I MI: Internal MI will be demonstrated prior to beginning injection. Since this well is constructed with a standard casing, tubing, and packer configuration, a successful mechanical integrity test (MIT) is required to take place at least once every five (5) years. A demonstration of Part I MI is also required prior to resuming injection following any workover operation that affects the casing, tubing or packer. Part I MI may be demonstrated by a standard tubing-casing annulus pressure test using the maximum permitted injection pressure or 1,000 psi, which ever is less, with a ten (10) percent or less pressure loss over thirty (30) minutes.

The cement bond log shows sufficient interval of 80 percent cement bond index or greater through the Garden Gulch Confining Zone and Part II MIT is not required.

PART VI. Monitoring, Recordkeeping and Reporting Requirements

Injection Well Monitoring Program

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, annulus pressure, monthly injection flow rate and cumulative fluid volume. This information is required to be reported annually as part of the Annual Report to the Director.

PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)

Plugging and Abandonment Plan

Prior to abandonment, the well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with any applicable Federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

PART VIII. Financial Responsibility (40 CFR 144.52)

Demonstration of Financial Responsibility

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

A demonstration of Financial Responsibilty in the anount of \$42,000 was reviewed and approved by the FPA on December 21, 2011.

The Director may revise the amount required, and may require the Permittee to obtain and previde updated estimates of plugging and abandonment costs according to the approved Plugging and Abandonment Plan.

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

44

Greater Boundary Federal 14-34-8-17

Put on Production: 9-16-05 GL: 5070' KB: 5082'

Spud Date: 4-22-05

Injection Wellbore Diagram

